

THE CALIFORNIA VETERINARIAN



Report of

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Pages 18 to 29



JANUARY - FEBRUARY

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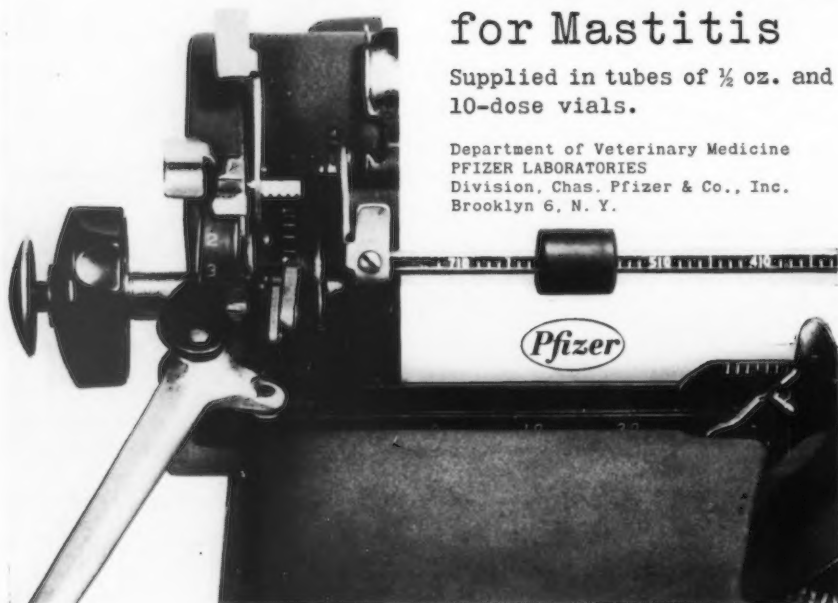
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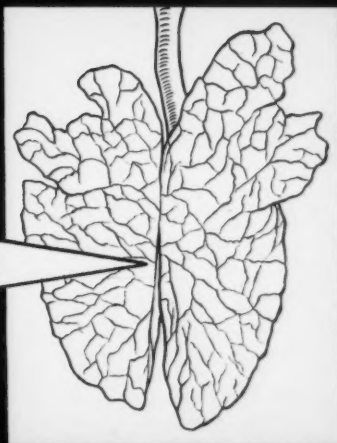
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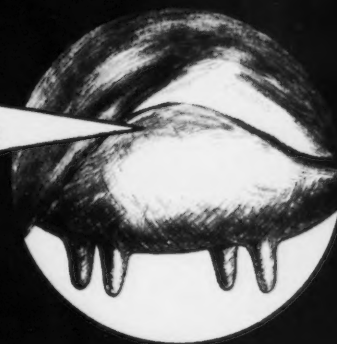
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March 1956

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CHLOROMYCETIN PALMITATE IN THE TREATMENT OF KENNEL COUGH

by James E. Cook, D.V.M.

Reprint, The North American
Veterinarian

The Clinical Use Of Chloromycetin in Dogs And Cats

R. G. Schirmer, D.V.M., F. E. Eads, D.V.M., M.S., and J. P. Newman, D.V.M., M.S.

Reprint, The North American
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Chloromycetin Intramuscular in Shipping Fever in Calves

R. W. Barnes, D.V.M.
April 1956

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CHLOROMYCETIN INTRAMUSCULAR IN SHIPPING FEVER IN CALVES

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INFECTIOUS KERATOCONJUNCTIVITIS OF CATTLE

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CHLOROMYCETIN THERAPY IN AN OUTBREAK OF HARD PAD

by M. B. Toosey, M.R.C.V.S.

Blood Level Studies in Dogs Following the Administration of Chloromycetin

F. E. Eads, D.V.M., M.S., and J. P. Newman, D.V.M., M.S.

The blood level studies in dogs following the administration of chloromycetin are shown in the following table:

Time (hours)	Blood Level (mg/100 ml)
0	0.0
1	0.5
2	1.0
3	1.5
4	2.0
5	2.5
6	3.0
7	3.5
8	4.0
9	4.5
10	5.0
11	5.5
12	6.0
13	6.5
14	7.0
15	7.5
16	8.0
17	8.5
18	9.0
19	9.5
20	10.0
21	10.5
22	11.0
23	11.5
24	12.0

BOVINE BLOOD SERUM CONCENTRATIONS OF CHLOROMYCETIN FOLLOWING INTRAMUSCULAR ADMINISTRATION

by F. E. Eads, D.V.M., M.S.
and K. D. Van Necker,
D.V.M.

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Chloromycetin Therapy in An Outbreak of Hard Pad

M. B. Toosey, M.R.C.V.S.

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Record

BLOOD LEVEL STUDIES IN DOGS FOLLOWING THE ADMINISTRATION OF CHLOROMYCETIN

by F. E. Eads, D.V.M., M.S.;
A. J. Glasco, Ph.D.;
L. M. Wolf, B.S.;
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Reprint from the American
Journal of Veterinary
Research

THE PRACTICAL RESULTS OF SENSITIVITY TESTS IN SMALL ANIMAL PRACTICE

by Margaret Schlichting, B.A.

Reprint from Veterinary Medicine

Bovine Blood Serum Concentrations of Chloromycetin Following Intramuscular Administration

F. E. Eads, D.V.M., M.S., and K. D. Van Necker, D.V.M.

The bovine blood serum concentrations of chloromycetin following intramuscular administration are shown in the following table:

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0	0.0
1	0.5
2	1.0
3	1.5
4	2.0
5	2.5
6	3.0
7	3.5
8	4.0
9	4.5
10	5.0
11	5.5
12	6.0
13	6.5
14	7.0
15	7.5
16	8.0
17	8.5
18	9.0
19	9.5
20	10.0
21	10.5
22	11.0
23	11.5
24	12.0

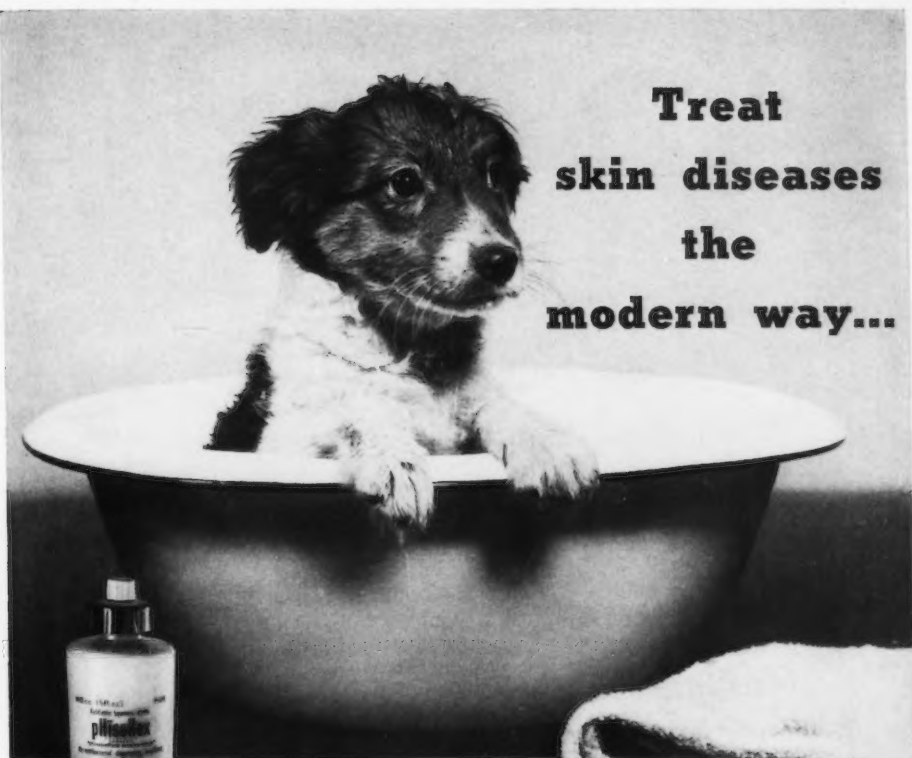
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THE CALIFORNIA VETERINARIAN

JANUARY-FEBRUARY, 1958

Contents

	Page		Page
Regulations on California Sales of Livestock Medications, William L. Hunter.....	16	Livestock Diseases Reported.....	35
Report, CVMA Midwinter Conference.....	18 to 29	Applicants.....	35
Women's Auxiliary Award Winner.....	21	A Post-Graduate University Extension Program for Veterinarians.....	36
Col. Richard Yule, Veterinarian, Sixth Army.....	29	Cattle Scabies Regulation.....	37
Dr. Lacroix Awarded 50-Year Service Pin.....	30	Women's Auxiliary News.....	38
The Editor Reviews Ads.....	30, 31	Officers, Meeting Dates, Local Associations.....	39
Stress Research Discussed at Veterinary Conference.....	31	Local Association News.....	40, 41
54th Annual Report, State Board of Examiners in Veterinary Medicine.....	32	Out-of-State News.....	42
Abstract of L. A. County Livestock Dept. Annual Report.....	33	In Memoriam.....	42
Laboratory Notes.....	34	Opportunities.....	43
		Col. McNellis, Assistant Chief, Veterinary Division.....	44
		Upjohn's Combination for Small Animals.....	45

Index to Advertisers

	Page		Page
American Cyanamid.....	44	National Casualty Co.....	50
Armour Laboratories.....	55	Norden Laboratories.....	9
Calo Dog Foods Co., Inc.....	48	Parke, Davis Company.....	12
Corn States Laboratories, Inc.....	2	Pfizer Laboratories.....	4
Cutter Laboratories.....	14	Pitman-Moore Company.....	6, 7
Diamond Laboratories.....	56, 57	Research Laboratories.....	59
Fort Dodge Laboratories, Inc.....	47	Schering Corporation.....	3, 5
Fromm Laboratories, Inc.....	8	E. C. Smith Co.....	43
Haver-Lockhart Laboratories.....	54	Squibb.....	10
Hill Packing Company.....	53	Upjohn Company.....	58
Jensen-Salsbery Laboratories, Inc.....	Back Cover	Warner-Chilcott.....	11
Kal Kan Foods, Inc.....	46	Winthrop Laboratories.....	13
S. E. Massengill Co.....	52	Wyeth Laboratories.....	49, 51
D. W. Morris.....	45		

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Volume 11

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Regulations on California Sales of Livestock Medications*

WILLIAM L. HUNTER

Chief, Bureau of Field Crops, California Dept. of Agriculture

In my talk with you today, I should like to discuss the general field of farm medications and our official interest in it. The subject is not new to us, but lately we have acquired a broader contact with it because of a new law dealing specifically with livestock remedies. It is well, perhaps, that we review in order to provide us with some perspective of the total situation, and be able, therefore, to judge this new law's place in the agricultural industry. A new law can be quite disturbing to individuals and to groups as its possible effects are first considered. It often happens that the better we learn to understand a law, the reasons for its enactment, and what it actually involves in our own daily lives, the better we can live and enjoy life under it.

The medication of farm animals has been growing tremendously in recent years. In fact, the present practices of farmers in their handling of drugs are almost a post-war development. This is particularly true in the instance of medicated feeds with which I am most familiar. In the late 1930's, I believe we had our first feed to which chemical additives were mixed for the purpose of controlling a livestock disease. In this particular case, it happened to be for the control of coccidiosis in poultry. It was not successful, and had a very short life, but it presaged practices which were to become general in the growing of poultry, and later extending to all of our farm animals.

Chemical research for therapeutic agents, during the war years, produced many new compounds, and, along with the development of their chemistry and pharmacology, came also production facilities of large capacity. At the end of the war, industry was capable of producing very large quantities of many "wonder" drugs, and their price was such that they could be extended to veterinary usages. Among the more prominent products in this early period were the several sulfanilamides, and they are still widely used in the control of certain diseases of livestock and poultry.

Around 1950, there came the use of antibiotics in feeds, first as growth promotants and later for their very definite therapeutic effects. Early usages were almost entirely for poultry, but practices recently have enlarged to use them in routine mass treatment of larger animals. Almost weekly we read of research that points to further new drugs which may soon be on the market for a variety of purposes. Things may be expected to grow much more complex, and there is

opportunity for a new alliance between all who are interested in this field.

In our feed regulatory work, we have watched these developments with a great deal of interest, and have participated in their control. I believe that our agency probably has a more active control of medicated feeds than any other governmental agency, state or federal, in the United States. We have a staff of inspectors who are calling upon feed plants, stores, and farms throughout the State where medicated feeds are regularly sampled, and later analyzed in our well equipped laboratory at Sacramento.

I should like to observe that, as a whole, the experiences of our control activities have been very satisfactory, and misrepresentations and misusages are at a minimum. Farmers using these products are, undoubtedly, deriving a benefit from them. Certainly, we cannot approve of all that has been done, but there does seem to be a general acceptance of this type of husbandry throughout the poultry and livestock industry.

While medicated feeds are regulated under a chapter of the Agricultural Code, until recently there was no similar specific control over drugs for mixing in feed or those which are administered directly to animals in dosage form or in some manner other than the feed, as for example, in the water. All usages and labeling of interstate traffic were passed upon by Federal Food and Drug Administration, but there was no specific control by state agencies during the period of their rapid development. Only the general drug laws applied. The sale of them was subject to state pharmacy laws, and, in many cases, they were legally restricted to sales by registered pharmacists only.

These general laws did not contemplate the situation that prevails today. It was never considered that there would be combinations of foods and drugs, as in the case of medicated feeds, nor was it considered that farm management and veterinary practitioners would have need for the wide variety of materials, virtually duplicating the drugs for humans. Such a new and very extensive practice as the modern handling and medication of farm animals was bound to come under review by those having general responsibilities over the handling of drugs. Thus, about two years ago, it did come under criticism from those interested in the enforcement of the pharmacy laws.

Notices of violations were issued in the instance of sales of drugs to feed manufacturers for use in medicated feeds, and sales of drugs to farmers for use in treatment of

*Presented at the CVMA Midwinter Conference, Jan. 27-29, 1958.

their own animals. Violation in the first case was because the sale was to a person who was not licensed as a drug manufacturer, and in the second because the product was dispensed without prescription. There ensued a series of meetings extending over about fifteen months' time in which various attempts were made to make it possible for the farmer to obtain these drugs without resorting to procedures which he regarded as burdensome, and probably involving more cost than he felt he could economically bear. Attempts to solve the problem were not successful, and, late in the session of the 1957 Legislature the text of a law, which was to become Chapter 7B of Division 5 of the Agricultural Code, was introduced. The sponsors of the bill were from livestock interests and the feed industry. There was some opposition, but the bill was passed by an overwhelming majority in both Houses. It became effective as law on January 1 of this year, and we are now assigned the duty of administering its requirements.

I believe you may know, it is our practice in the Department of Agriculture never to sponsor basic legislation of this type; however, we will always assist groups and give our views about legislation which they are proposing for inclusion in the Agricultural Code. We provide them such information as we have relative to the similar laws as contained in the statutes of other states. We will give them our opinion as to the feasibility of enforcement and particularly with regard to the cost of administration of the law as written by them. Our service in the instance of this law was to provide information on the laws contained in other states. This took the form of a synthesis of some fifteen or sixteen laws, and a model law developed by the Association of American Feed Control Officials. The law, as finally enacted, contains some features which are not common to any of these other laws, but were felt necessary in order to meet the local situation. I refer to the specific statements of identification as a livestock remedy required on the label, and to the license to sell hazardous remedies at retail.

Let us have a look at this law to see its general requirements. In the first place, it is confined entirely to the drugs employed in the treatment of agricultural animals; drugs for those species regarded as domestic pets are excluded in their entirety. It is strictly an agricultural law. It requires registration of products, and such registration includes a review of the labeling, its claims of value, guarantees of content, directions for use, and necessary warnings against misuse. Classified as hazardous remedies, are those drugs which may be administered to humans, or which may be harmful to the health of livestock, or to humans who consume products of such animals when the drug is misused. It is necessary to have a license to sell hazardous remedies at retail. These are general require-

ments. There are some others which could be discussed if we had more time, but they are not pertinent to our first review of the law.

Among the exemptions of the law are products sold exclusively to and used exclusively by or under the direction of a licensed veterinarian. Products compounded and sold by registered pharmacists are also exempt. Exemptions applying to classes of products, as distinguished from professional practices, include the biological products manufactured under license of the U. S. Department of Agriculture or State Department of Public Health, and any drug required by federal law to be sold on prescription only. At this point I think we can begin to make the application of the law clearer if we consider some examples of what is to be done in order to meet its requirements. If you are a manufacturer of a drug, or a repackager selling a drug under your own label, it is necessary that you apply for registration of the product, submitting labels used on various sized packages, and perhaps other information as to composition, if it is not completely supplied on the label. The application shall be accompanied by a fee of \$25.00 for each product. We review the label, pass upon its completeness and correctness, and, if satisfactory, issue a registration which allows the product to be sold. If the product is a hazardous remedy and is to be sold at retail by the manufacturer, his distributor, or anyone else, the hazardous remedy license becomes necessary. Hazardous remedies are not specifically listed in the law; but a guide for their classification is given. We find it necessary to consider that soluble or injectable antibiotics, and antibiotic type mastitis treatments must be included in this class because of testimony developed in the course of the enactment of the legislation.

Veterinarians may buy and sell these products also. You, of course, under your professional license, are entitled to buy them for the purpose of administering them to animals under your treatment. This new law permits you to buy them and provide them, including sale, in any situation under your direction. We expect to give recognition to practices which we know you are following and which are perfectly satisfactory in providing these drugs for use under your general direction. Thus, you may charge for the drug without special license, even though it is a hazardous remedy, so long as the usage is under your direction. On the other hand, if you are selling hazardous remedies from a dispensary where your professional advice and services are not always available, the license is required. Such over-the-counter sales by an assistant, not capable of rendering professional services, are outside the exemptions provided in the law. We believe these provisions and the policies which we intend to apply, will more

(Continued on page 44)

Report of the California Veterinary

Held at the University of California

The Midwinter meeting is always popular, with attendance about twice as great as at the summer meeting. The speakers played to packed houses, and even on Wednesday afternoon every seat in the auditorium was taken and men were sitting in the aisles and standing at the rear. The high quality of the papers given justified the interest and attention of the practitioners.

We have received a great number of summaries from the speakers at each successive meeting, and this time fully half of the speakers were so considerate as to supply them. These authentic summaries are identified in the following report by center headings. The others are merely your reporter's interpretation.

Once again we deeply appreciate the splendid cooperation given us by the Faculty of the School of Veterinary Medicine.

On Sunday the Large Animal Practitioners' Luncheon, sponsored by the H. C. Burns Company, was held at the El Rancho.

The AAHA Regional Meeting and Dinner was held Monday evening at the El Rancho.

On Tuesday, the Midwinter Conference Poultry Section was held in the Veterinary Science Building.

MONDAY

GENERAL SESSION

The meeting was called to order at 1:30 by President Walker, and Dr. Kennedy then introduced Dean Jasper. His address was unusually informative and we reproduce the major portion herewith.

Opening Remarks

DEAN DONALD E. JASPER

This Midwinter Conference has almost become traditional. Your attendance and interest has increased each year. This is a tribute, not only to those who have worked so hard to prepare the program, but to you who come. For in this manner you demonstrate to all your eagerness to become better qualified to render the service expected of you.

The veterinary profession has changed immensely and is still undergoing changes. The small animal practitioner more and more simulates the physician in the services he is able to render. The increase in numbers of such practitioners and the improvement of the type of service rendered is almost phenomenal. The role of the veterinarian in such activities as research, public health, and the care of ex-

perimental animals for large research organizations is increasingly large and receiving greater recognition. Our concern for these areas is chiefly that the current desirable trends continue.

We do, however, have a proper concern for the role of the veterinarian in our livestock and poultry enterprises. We tell ourselves that in this competitive age of narrow margins only the most efficient can survive and that efficiency demands veterinary service. This I firmly believe. Yet there are obvious signs that we are slipping and in some cases, slipping badly. I don't know all the answers to the problem, but one of the answers lies in the ability of the veterinarian to demonstrate his worth. And that is one of the principal reasons you are here. We hope you will learn things that will make money for your client.

It is the function of the University to accumulate and disseminate knowledge. Dissemination is not limited to the classroom, but encompasses virtually all means of communication. This conference is one means. We believe, too, that you should be as well informed as possible concerning observations which may have been made by our staff, or their beliefs regarding certain problems. For that reason a number of them are on the program, as it is not fitting that the profession be unaware of advances being made, or of advice which may be given to the industry.

Real progress was made this year when we were finally able to convince the Director of Agricultural Extension that the extension service had an obligation to serve the practicing veterinarian as well as the livestock owner. Very often we feel that the best way to serve the industry is to provide new information to the practitioner through printed releases, short courses, and demonstrations. We have had one short course already on fertility testing of the bull, which was well attended and enthusiastically received. Perhaps the next one will deal with poultry management and diseases. We hope there will be many more and your wishes will be the major determining factor. They need not necessarily be held at the University. The addition of a third extension veterinarian greatly facilitates these services to the veterinarians of the state.

You may also be interested to know that our curriculum is being altered to allow more instruction on nutrition, feed additives, implants, and other practices entering production practices today. We will endeavor to give the veterinarian of tomorrow a better foundation upon which to become a partner, as it were, in the management of a herd for profit.

al Association Midwinter Conference

Davis, January 27, 28, 29, 1958

Anemias in the Cat

JEAN HOLZWORTH, D.V.M.

It seems to me that in no species of domestic animal are blood studies more necessary or more rewarding. Disease elicits many abnormal lymphocytes and monocytes, often with large acidophilic or azurophilic cytoplasmic bodies. Blood groups are apparently not of great importance. Isohemolysins may develop after one or more transfusions from the same donor, but no deaths have resulted, although nausea and dyspnea, with some hemolysis, may occasionally occur.

Hemophilia has not been reported in cats but other hemorrhagic tendencies are occasionally encountered. A high estrogen level may be blamed for prolonged oozing of blood after spaying, but the tendency more often accompanies severe anemia, leading to subcutaneous hemorrhage, or bleeding from the gums or into the chambers of the eye. Thrombocytopenia may be the cause, due to toxic depression of marrow with overcrowding by malignant cells; rarely the platelets appear to be destroyed by the spleen. Sometimes liver disease is responsible for deficiency of prothrombin or fibrinogen.

There are three general groups of anemias. The anemia from hemorrhage has usually an obvious cause, and the blood would show accelerated red-cell formation and leukocytosis within a few hours, indicating good marrow response.

Anemias due to increased red-cell destruction may be due to infectious agents, chemicals, or antigen-antibody or auto-immune reactions. There may be hemoglobinuria or jaundice, and sometimes an enlarged spleen. Blood films show many young red-cell forms and white cells are usually increased. If the cause can be dealt with, transfusions may successfully aid the cat through the crisis. In the specific infectious anemia described by Flint and Moss, some good results have been reported with chloromycetin and terramycin. Very rarely, an overactive spleen may be the cause of hemolytic anemia, but the spleen should not be removed unless blood studies have eliminated the possibility of a leukemia.

Most of the anemias, however, are due to decreased red-cell production. Chronic liver or pancreas disease or gastric fur ball may cause anemia of this general type. Iron deficiency is rarely dietary, but may follow parasitism or stomach ulcer; the cells are small and pale. Toxins are more commonly responsible for decreased red-cell formation, as in panleukopenia and a tremendous variety of other infections. A good marrow response is encouraging. Chronic infections usually are accompanied by a lack of young red cells, but

the white cells vary in number and type. Poisoning may in some cases result in leukopenia, or in others be followed by infection and secondary response to bacterial invaders. Lastly, moderate anemia, but irreversible, may accompany chronic kidney disease with slowly developing uremia.

A substantial number of cases of severe refractory anemia in cats are associated with leukemias, and the diagnosis may be difficult and long-delayed if the disorder is of a sub-leukemic or aleukemic type.

Vascular Diseases in Man and Animals

(Stuart Lindsay, M.D.). Arteriosclerosis is a disease of aging, and its increasing incidence reflects the aging of the population. The American diet is supposed to affect the incidence. However, arteriosclerosis does also occur in the very young, and cholesterol is not the only factor involved. Dr. Lindsay has studied arteriosclerosis in 25 species, and finds other processes going on long before lipid deposition, which is a characteristic of the disease in man rather than in animals generally. The slides demonstrated the development of the lesion, making it clear that arteriosclerosis is a degenerative disease, with later lipid infiltration in some instances.

Equine Respiratory Viral Diseases

(Jack Bryans, Ph.D.). Respiratory diseases are most important in horses, and most frequent in the younger group. The age difference is partly due to more stress in the young, and to their physical immaturity. Most of the agents responsible have not yet been captured in the laboratory. Dr. Bryans described two viruses, both causing catarrhal inflammation of the respiratory tract, abortion, and systemic disease. One is known as equine influenza, cellulitis, or more properly, equine rhinopneumonitis. It is the same as the virus of "viral abortion." The virus of the second disease, equine viral arteritis, was isolated a few years ago during a serious outbreak in Ohio. Both viruses cause leukopenia, but not the same blood picture. They are not related to each other or to human or swine influenza.

Rhinopneumonitis has only recently been studied. It can be epizootic, and has been responsible for outbreaks in Kentucky, 95 per cent of cases occurring between December and April, and most of them in January. One or two cases on a given farm is usual, although 80 per cent morbidity has occurred. It rarely occurs on the same farm in consecutive years. Carriers have not yet been found, but probably exist. The incubation period is 5 to 50 days, experimentally. There is a fever of 102 to 105, higher at night, and lasting from two days to a week or more. Rhinitis progresses to mucopurulence; there is coughing,

REPORT OF CVMA MIDWINTER CONFERENCE

conjunctivitis, leg edema; sometimes edema of the larynx and pharynx; but rarely pneumonia. Abortion occurs one to three months after the disease has been recognized in the young horses on the farm, and not usually before the eighth month of gestation. The mare may show no signs of disease or impending abortion, and there are usually no complications such as retained afterbirth. There may be posterior paralysis, which disappears at the time of abortion; if abortion does not occur, it may progress and lead to death. Most of the fetuses have lesions but are alive at the time of abortion. Their lungs are heavy and rigid; this edema is the best indication of virus abortion. There are hemorrhages in the lungs and mediastinum, much clear fluid in the thoracic cavity, and necrosis of the liver.

Serologic tests are valueless, as the antibodies do not rise just before or after abortion. Vaccine made from fetal tissues causes hemolytic jaundice in the foals. Vaccine made from the livers of infected hamsters does not produce antibodies in foals, but may be of use in mares. A nasal spray is being developed, but its value has not yet been proved.

The Chemical Nature of Virus Infectivity (Heinz Fraenkel-Conrat, M.D.). Viruses are so closely connected with genes that it is hard to tell where one stops and the other begins. Some viruses apparently can join the cell gene, be reproduced invisibly for generations, and then be activated by ultraviolet light or a carcinogen. In other cases a virus can kill a cell and come out of it different in strain. Therefore, not only can virus material join cell material, but cell material can join a virus. There is no real borderline between virus and non-virus any more than between life and non-life. A cell can put out DNA (deoxyribonucleic acid) and change the genetic character of another cell. DNA extracted from a virus can cause the same disease as the virus itself, and so can RNA (ribonucleic acid).

Tobacco mosaic virus is constructed with the protein outside and the nucleic acid inside, but not quite like the lead in a pencil. The protein is built of units containing six peptides each, arranged in a helical fashion. If broken up, these proteins will rearrange themselves when given the right pH, in chains of unrestricted length. When the nucleic acid is present to serve as core, the length of the helix is determined somehow by the nucleic acid. The virus thus reconstituted is just like the original virus, and much more stable than either component. The disease produced is determined by the core, and the immune reaction by the protein. A core wrapped with the wrong protein will cause the right disease but will have the wrong immune reaction. Its

next generation will have the right protein wrapping, synthesized by the obliging host.

Business Meeting. The business meeting was called to order by President Walker at 4:30. Six applications for membership were accepted: L. D. Leonard, Fresno; Wm. R. McFadden, Rosemeade; Wm. D. Urban, Ontario; James T. Dowe, Chula Vista; Jack K. Robbins, Thousand Oaks, and Wilmer L. Moore, Long Beach. Life memberships were conferred on Dr. L. B. Wolcott of Los Angeles, Dr. N. E. Clemens of Hayward, and Dr. E. V. Bacon of Los Angeles. Dr. Walker reported that the executive committee has received a resolution from the Mid Coast VMA and another one from the Bay Counties VMA, pertaining to an increase in the annual dues of practicing members to \$50 a year. These resolutions were referred back to the Ways and Means Committee for further study.

Dr. Collinson then gave a report from the Legislative Committee, and proposed that they be given encouragement to look further into the Public Health League, so that the Association might take out associate membership in June, if the members desire. He presented a resolution to this effect, which was unanimously approved.

Dr. Carricaburu reported for the Public Relations Committee who have concluded that no public relations experts for any amount of money could help our situation unless the veterinarian practices good public relations in his home town, and not only in his practice. They are making another attempt to start speakers' bureaus, and will have the plans worked out by June. In the meantime Dr. Carricaburu urges every local association to appoint a public relations chairman as soon as possible, to help organize our programs.

It was decided that the 1959 June meeting will be in Santa Monica, and the 1960 meeting in San Francisco. The Executive Committee is now considering an invitation from the Kern County group to hold the 1961 meeting in Bakersfield.

The meeting was adjourned after a moment of silence in honor of deceased members.

TUESDAY

PET PRACTICE

Surgical Correction of Canine Ear Diseases

N. I. McBRIDE, D.V.M.

Lateral resection of the ear canal of the dog is a valuable means of handling otitis externa of many breeds. The purpose of lateral resection is to establish proper ventilation of the ear by altering the ear canal. If proper technic is performed, the results are quite satisfactory. If improper technic is used, it can easily result in a further narrowing or complete obliteration of the ear canal, with

Women's Auxiliary Award Winner



While Mrs. Louis Johnson, Sacramento, chairman of the CVMA Women's Auxiliary scholarship committee, watches, Mrs. Charles H. Ozanian, auxiliary president, right, presents \$200 scholarship award to Robert Henry Smith.

Robert Henry Smith, Davis veterinary student from Long Beach, has received a \$200 scholarship from the Women's Auxiliary to the California Veterinary Medical Association.

Smith, a senior in the University of California School of Veterinary Medicine, is to receive his DVM degree in June. The award was presented to him in connection with the Veterinary Medical Association's annual Mid-winter Conference at Davis.

The 29-year-old Korean war veteran was chosen because of a high scholastic record in veterinary school and other qualities deemed desirable in an aspirant to the veterinary profession. Selection was made by the auxiliary's scholarship committee, headed by Mrs. Louis Johnson of Sacramento, and the group's executive board. Mrs. Charles Ozanian of Bellflower, state president of the auxiliary, presented the scholarship to Smith at a luncheon in El Mirador Hotel in Sacramento.

resultant failure of the surgery to accomplish its purpose. A simple modification of the Lacroix-Zepp technic of lateral resection will be demonstrated which, if used, will greatly increase the chances of success of lateral resection.

Established otitis media presents one of the most difficult problems that the small-animal practitioner may be called upon to face. A method of controlled surgical drainage will be demonstrated, which allows continuous escape of exudate from the internal ear and efficient application of therapeutic agents directly into the diseased area.

Basic Principles of Handling Skin Diseases (John Epstein, M.D., with slides by M. H. Schaffer). Moist eczemas are very common, and lesions can occur overnight; the cause is usually unknown. In man they are usually acute, and are treated with soothing applications and anti-inflammatory agents; aspirin and other peroral antipruritics (Thorazine,

Phenargan) are useful. The patient can't be cured unless the itching is stopped first. Beware of using too stimulating agents in sensitive areas such as the ears. A drying agent is used in the axilla, groin, and other areas where there are heavy folds of skin.

Ringworm is less persistent in animals than in man. Children may not clear up scalp ringworm (human type) until puberty. The hair is cleared with potassium hydroxide (10 per cent) for diagnosis, and identification of the type by culture is helpful for the prognosis. Demodex does not produce the same lesion in man as in dogs. It is sometimes found in large numbers in a lesion, but it is not known whether it is a cause of the trouble.

Skin tumors are treated much the same in man and animals. Benign tumors, diagnosed by punch biopsy, are removed. Infectious papillomas are similar to human warts, and if some of them are removed the others often disappear. Mast cell tumors are usually be-

REPORT OF CVMA MIDWINTER CONFERENCE

nign in man but must be removed early in the dog. Melanoma is not as malignant in animals as in man, where the prognosis is grave. Epitheliomas must be completely removed in both man and animals.

Collie nose is probably due to photosensitization, and there are similar afflictions in man. Some antimalarials, such as chloroquin, are useful in man, and might be tried in animals, starting with low doses and working up.

Overtreatment is to be avoided, and sometimes any treatment at all is undesirable. It is often wise to watch and wait, although this rarely pleases the client.

Specific Skin Disorders of the Cat (Jean Holzworth, D.V.M.). The cat has skin disorders less frequently than the dog, but the variety is just as great. The cat's surface is more vulnerable than the dog's only in respect to chemical toxicity. Amounts of benzyl benzoate, Canex, DDT and other chlorinated hydrocarbons, salicylates, phenolic and coal-tar derivatives, mercurial and iodine compounds, that would give a dog no trouble may be fatal to the cat either by local damage or by absorption.

Eczema is usually mixed acute and chronic, or purely chronic. The cause is not established, but it has in rare cases been reliably attributed to allergy. Nutrition is probably not involved. The most effective local treatment is removal of fleas and rinsing with Phisohex or selenium (washed off thoroughly) or mild sulfur preparations (allowed to dry on). Antihistaminics and sex hormones may be useful, but cortisone is most effective. Small semiweekly doses may be continued indefinitely to ward off recurrence.

So-called "rodent ulcer," which may also have allergic implications, is a non-malignant lesion usually affecting the upper lip, which may become much thickened. Often associated with this are raised, angry-looking proliferations in the buccal cavity; small lesions may appear between the toe pads. Skin lesions heal spontaneously if protected from the cat's tongue. Lesions may be removed from lips and mouth by deep electrocautery followed by cortisone and a broad-spectrum antibiotic. Recurrence may be prevented, as in eczema, by cortisone.

The endocrine etiology of a skin disorder is occasionally suspected but rarely established. Thinning of hair in neutered cats of middle age or older has been caused by thyroid deficiency in some cases, and sometimes moderate doses of estrogen or androgen bring about improvement. Conversely, spaying may be beneficial to some cats that are constantly in heat or have endometrial hyperplasia. Occasionally a syndrome of the Cushing type has been suspected but not proven.

Wound infections with trench-mouth spirochetes occasionally are seen in fighting toms. These are very destructive to tissue, resulting in enormous sloughs. Blood-forming tissues may be so depressed that pancytopenia results.

Cryptococcosis, or tolulosis, deserves more attention, as although rare, it is invariably fatal. The typical yeast cells have been numerous in all cases, both in wet preparations stained with India ink or Lugol's solution, and in hematoxylin-eosin sections.

Ringworm is the most important skin infection of cats and is usually caused (98 per cent) by *Microsporum canis*. The Wood's light gives a yellow-green fluorescence in many, but not all, cases. Healthy carrier cats have been found, especially in catteries. Complete, close clipping and thorough treatment over a period of weeks or months, may effect a cure, but it is often advisable to recommend euthanasia. Many of the fungicides useful in other species seem ineffective in the cat, and the medicaments used should be varied frequently so that the cat will not be exposed for too long to any one of them.

For otodectic mange, drastic treatment is unnecessary. Several thorough treatments with bland oil usually eliminate the parasite. Notoedric mange (head mange) is rarely seen until considerably advanced. These cats are often poor risks for barbiturate anesthetics, and drastic treatment is contraindicated. Usually, massage with an oily sulfur preparation will soften crusts, soothe the skin, and destroy the mites. When the cure is well along and the cat's condition improved, a bath and good scrubbing are in order. This has been called "sarcoptic mange" but is not similar to sarcoptic mange of man and dog; man is not susceptible.

Screw-worm infestation occurs in the cat, and in the past two years has been reported as far north as Pennsylvania.

Squamous-cell Carcinomas of White-faced Cats (Myron H. Schaffer, D.V.M.). Dr. Schaffer showed slides of the ear carcinomas, occurring not necessarily in white cats, but on white ears only. There is ulceration, curling of the edges, scabbing, and a waxy appearance. The affected portion of ear is removed, and sutured as for an ear crop.

* * *

Dr. B. A. Rasmusen's paper on "Some Applications of Genetics in Small Animal Practice" will appear in a forthcoming issue of The Journal.

Immunization in Canine Leptospirosis

ERNEST L. BIBERSTEIN, D.V.M., Ph.D.

There have been no published systematic studies on immunization of dogs against leptospiral infection since the publication of the work of Brunner and Meyer eight years ago.

REPORT OF CVMA MIDWINTER CONFERENCE

They had found that by injection of killed organisms resistance to challenging doses, given a short time later, could be induced. Nothing is known regarding the efficacy of this or any other vaccination procedure under field conditions. The following facts have, however, been established: Antibody levels of a rather low order of magnitude can be established with killed cultures or their derivatives. These titers are of short duration compared to those following exposure to living organisms, six months being a rather optimistic estimate. Young dogs, even of an age at which vaccination against other agents is generally successful, are highly erratic in their antibody response even to live organisms, and titers may disappear within six weeks to two months of inoculation. No demonstrable secondary antibody response occurs in animals carrying residual titers from a previous vaccination, infection, or ingestion of colostrum from immune dams. This situation throws doubt on the soundness of routine revaccination.

The only use of vaccine against canine leptospirosis that can be recommended at this time is as a stopgap measure for temporary protection of dogs entering shows, field trials, or boarding kennels. Quite probably, a high-titered antiserum would be preferable.

Complications in the Diagnosis of Canine Filariasis

NORMAN F. BAKER, D.V.M., Ph.D.

The recent discovery of two types of microfilariae in the blood of experimental dogs by Newton and Wright led them to believe that a filarid worm other than *Dirofilaria immitis* might parasitize dogs in the United States. Subsequent work established that this was the case, and showed that *Dipetalonema reconditum*, a filarid inhabiting the subcutaneous tissues, was the parasite responsible for one type of microfilaria, while *Dirofilaria immitis* was responsible for the other type. Since the finding of microfilariae in the peripheral blood of dogs can no longer be considered diagnostic of heartworm infection, the diagnostic tests commonly used by veterinary practitioners are inadequate. By use of a modified Knott's procedure and subsequent microscopic examination and measurement of microfilariae the two species may be differentiated. In addition, Giemsa-stained thick films examined under oil immersion will reveal differences in the internal anatomy of the microfilariae. The possibility that still other species of filarid worms may exist in dogs in the United States should be kept in mind.

The Present-Day Uses of the Thomas Splint

BERNARD A. HOEHNER, D.V.M.

The impact that internal fixation has had on veterinary orthopedics makes it necessary

to examine the present status of the Thomas splint.

When used in conjunction with various methods of internal fixation, the support it adds greatly increases the chances of correct bone healing. In comminuted fractures of the femur or humerus, where a pin is used to promote alignment of fragments, a Thomas splint should be applied to prevent shortening of the limb or rotational displacement. In the use of the Leighton shuttle pin, it is wise to utilize the additional support provided by the Thomas splint. In "T" fractures of the elbow, it provides a counterforce against the pull of the triceps, taking the strain off any pin or screw that may be used. In fresh sprains of joints, it may be used to rest the part, preventing further damage while allowing healing to take place. Following surgery of joints such as the elbow or stifle, or in ligament reconstruction, it provides rest and support while the tissues heal.

As primary fixation, probably its best use is in tibial fractures and especially comminuted ones. The tibia does not lend itself to internal fixation as well as the other long bones, and the Thomas splint can be used to good advantage without jeopardizing the stifle joint.

The Thomas splint remains a great contribution to veterinary orthopedics, and its value justifies the mastering of its design and application.

Ear Disease in the Dog

N. L. McBRIDE, D.V.M.

Breeders have altered various breeds of dogs, i.e., the spaniel breeds, just as the dairyman has altered the modern dairy cow. Selective breeding over a number of years in many cases has resulted in a narrow skull, prominent eye, and a low-set, pendulous conchal cartilage. The weight of the conchal cartilage effectively "caps" the external meatus and prevents good ventilation of the ear canal. The ear canal is also longer and more tortuous than formerly, which further complicates ventilation. Selective breeding for a heavy coat has resulted in an extreme increase of hair on the medial aspect of the conchal cartilage; this hair also continues into the ear canal proper. This, too, prevents efficient ventilation of both the external meatus and the canal itself.

This improper ventilation results in a persistent, unhygienic ear canal which becomes chronically inflamed with rather characteristic progressive pathological changes. The inflammatory changes are soon complicated by stubborn bacterial infections, which until rather recently were for the most part Gram-negative in nature. Lately, Gram-positive bacteria have also been identified as causing persistent otitis in the dog.

REPORT OF CVMA MIDWINTER CONFERENCE

It is quite possible that persistent otitis is continually on the increase because of anatomical characteristics of certain breeds and the increasing resistance of both Gram-negative and Gram-positive bacteria.

Injuries to the Ligaments and Meniscuses of the Stifle (Alida P. Wind, D.V.M.). Dr. Wind showed slides carefully explaining the anatomy of the stifle joint and the functions of its parts; this led to a discussion of the diagnosis of joint injuries. Partial ruptures become complete if not properly treated, and in such cases surgical care is very worth while and gives excellent results. Muscle atrophy may be the first sign noticed in slight chronic lameness. Radiographs will show exostoses, joint mice, etc. Cortisone with or without aspirin is useful. The joint can be opened and cleaned up, and although this may be very difficult, the results may be quite remarkable. Firing may be useful in selected cases. In general, the prognosis is not too good, especially if there are complications, and it is worthwhile before surgery to consider all factors.

Clinical Pathological Conference. A case history was presented by Dr. Cello to B. A. Hoehner, I. M. Roberts, M. H. Schaffer, and Robert Foos. They made their diagnosis from the history given, and their reasons for rejecting other possibilities. Their performance was impressive, and it was a most enjoyable feature.

TUESDAY

LIVESTOCK PRACTICE

Current Status of Bovine Dwarfism

LOGAN M. JULIAN, D.V.M., Ph.D.

The status of bovine dwarfism today is dependent upon the interpretation of its mode of inheritance and upon the definition of dwarf animals.

There are two schools of thought concerning dwarfism. One maintains that the dwarf problem is confined to the brachycephalic (short-headed, snorter) dwarf, and that this condition is inherited as a simple recessive gene. Thus, according to this viewpoint, the cattle population is divided into three groups (in reference to dwarfism)—dwarfs, heterozygotes, and normal animals.

On the other hand, the concept of bovine dwarfism, as developed by P. W. Gregory and collaborators at the University of California, presents dwarfism as a complex which includes not only the brachycephalic dwarf, but also the dolichocephalic dwarf, several types of intermediate dwarf forms and compressed cattle. Increasing evidence from controlled mating tests and from detailed anatomical studies supports this concept of dwarfism.

All statements, publications, and informa-

tion concerning bovine dwarfism must be interpreted by the reader as to the concept of bovine dwarfism and the interpretation of its mode of inheritance held by the writer.

Each dwarf type must be defined and recognized and its genetic relation to the other groups must be established and appreciated before the problem can be understood, or before hope for a solution can be had. The only method of control available at present is the progeny test; however, the progeny test as routinely performed today is ineffective. All types of dwarfs must be recognized. No animal may be discarded from the test progeny without a thorough examination. In many cases it is necessary to permit progeny to mature before a diagnosis can be made with certainty.

Research on dwarfism is advancing by further elucidation of the mode of inheritance of dwarfism and by the establishment of additional structural and functional criteria of each dwarf group. The latter may be employed to aid in the identification of members of the dwarf complex resulting from progeny tests. Veterinarians may assist materially toward a solution of dwarfism by keeping abreast of the changing status of the field and by making their knowledge available to animal producers.

Pleuropneumonia-Like Organisms in Diseases of Animals

DONALD R. CORDY, D.V.M., Ph.D.

Pleuropneumonia-like organisms (PPLO) are tiny, bacteria-like micro-organisms which can be grown on cell-free artificial media. They are generally regarded as being highly host-specific.

Bovine pleuropneumonia in cattle and caprine pleuropneumonia and contagious agalactia in goats and sheep are important PPLO infections in various parts of the world, but are not known to occur in this country.

In 1954, a highly fatal PPLO infection appeared in a California dairy goat herd. The disease was septicemic in nature, with severe arthritis in animals surviving any length of time. Two subsequent isolations have been made in California, and similar outbreaks have been reported from Australia and Sweden. While this PPLO has some affinities to caprine pleuropneumonia, it appears to be a distinct type. Experimentally inoculated sheep and goats showed a disease similar to the field cases, with the added appearance of serositis and some meningitis. Very surprising was the fact that this PPLO produced the disease in equally severe form in swine. Calves appeared not to be affected. Limited field trials and egg embryo protection tests suggest some beneficial effects from the use of tetracyclines, erythromycin and streptomycin.

REPORT OF CVMA MIDWINTER CONFERENCE

PPLO of a distinctive type were isolated from a case of arthritis in a calf. The agent produced lameness in experimental calves, but was innocuous to lambs and pigs.

In a study of ovine lobar pneumonia, 8 isolations of PPLO were made from 23 field cases. The organism was also recovered from 13 of 100 normal lamb tracheas. While playing no important part in pneumonia, the PPLO did produce a transient arthritis in many of the experimental lambs.

Nocardial Mastitis in Dairy Cows

A. C. PIER, D.V.M.

The bovine mammary gland is known to harbor a wide variety of micro-organisms, a few of these cause the vast majority of mammary disease, fewer still are implicated in public health problems and many are scientific curiosities. Recently *Nocardia asteroides* was isolated from 18 per cent of the udders in a single California dairy herd. The infection was previously unreported in this country.

Clinical evidence of infection has been observed in first lactation heifers within a week of calving, as well as in older animals in mid lactation. Infected glands shed altered milk which, in advanced cases, contain masses of branched mycelia, which can be presumptively identified by microscopic examination. Diseased animals have shown temperatures reaching 107° and extreme fibrosis of the infected glands which often contain palpable nodules. A single fatality has been observed. Pathological changes of the infected glands include granuloma formation and proliferative changes of epithelial surfaces. The extreme induration of untreated glands soon makes slaughter an economic necessity.

Therapy trials using 500 mg. novobiocin in 25 to 40 cc. nitrofurazone (0.2 per cent) solution have been successful in several naturally infected animals. The organism has survived exposure to 64° C. for 30 minutes. Of four commonly used disinfectant solutions tested benzalkonium chloride (Roccal's) and chlorine, both at 200 p.p.m., were found to be most effective.

To date nocardial infections have been recognized in 4 herds in California.

Progress Report on the Marin County Pilot Whey Testing Brucellosis Program

H. S. CAMERON, D.V.M., Ph.D.

In order to implement the recommendation of the United States Livestock Sanitary Association that further research should be conducted on the whey test to evaluate its effectiveness in eliminating brucellosis from dairy cattle under the area plan, a pilot program was initiated in Marin County. The program, cooperative with the U.S.D.A., the California Division of Animal Industry, and

the University of California, went into effect April, 1957. Herds were screened by the milk ring test. Individual lactating cows in ring suspicious herds were whey tested and dry cow's blood tested. Whey testing was by the plate technique, using milk ring test antigen rather than blood test antigen. On the first complete round of testing in the county some 240 herds, representing a total of 37 thousand animals over 6 months of age, 33 per cent of the herds contained reactors to the whey or blood tests, or 1.09 per cent of all animals over 6 months of age. On the basis of retests on about half the county, infection has been eliminated in about 70 per cent of the infected herds, and the percentage reactors reduced to 0.38. This also represents a reduction in whey reactors from 2.9 to 0.8 per cent. The preliminary results suggest that brucellosis in dairy herds can be eradicated by whey testing rather than blood testing lactating cows.

Infectious Bovine Rhinotracheitis

R. V. JOHNSTON, D.V.M.

A new disease of cattle, now called infectious bovine rhinotracheitis (IBR), was first observed in Colorado and California in about 1950 and was called variously "acute upper respiratory disease," "infectious necrotic rhinotracheitis," and "red nose." The disease is characterized by severe inflammation of the upper respiratory passages accompanied by excessive nasal discharge, salivation, dyspnea, fever, weight loss, and sometimes pneumonia and death. The fact that the lesions are limited to the respiratory system helps differentiate IBR from mucosal disease, virus diarrhea, malignant catarrhal fever, and rindeerpest.

With the use of tissue culture procedures, an infectious agent was isolated from clinical cases of IBR in California, Colorado, and Ohio. It was shown that the agent was a virus which would reproduce the disease in experimental animals, and the various isolates proved to be identical by serum neutralization and cross-protection tests.

Fortunately the virus produced a cytopathogenic effect in tissue culture which facilitated its study in the laboratory. By using special "terminal dilution" technics, a strain of the virus was modified by passage in tissue culture. The modified virus does not produce any signs of disease except for an occasional transient fever, yet it stimulates the production of antibodies and a high degree of resistance to infection. The modified virus is not spread by contact between vaccinated and susceptible animals; it does not cause a reduction in milk production; and it does not cause lesions even when large amounts are sprayed intranasally. It is now available as a freeze-dried vaccine called "Rhivax"®.

REPORT OF CVMA MIDWINTER CONFERENCE

Virus Diseases Producing Abortion in Mares (Dr. Jack Bryans, Ph.D.). Dr. Bryans described equine arteritis, which resembles the rhinopneumonitis discussed the day before, but is not related to it. It also causes what is called "equine influenza," and is not usually accompanied by severe bacterial infections. The incubation period is one to four days after intranasal inoculation; there is a fever of 102 to 106, lasting 4 to 9 days; leukopenia, with as much as 50 per cent reduction, and lymphocytes sometimes fewer than 1,000; lacrimation, conjunctival and nasal congestion and discharge; photophobia but no permanent damage to the eye; and forced abdominal breathing especially on exercise. Feed and water intake are reduced according to the severity of the disease. There is edema of dependent parts and lower limbs, abdominal pain, icterus and dehydration. Persistent early colic is a bad sign. There is depression and reluctance to move, ataxia of the rear limbs and relaxation of sphincters. Abortions occur during or immediately after the fever, or in early convalescence, sometimes without warning. The characteristic lesion of the fetus is an intranuclear inclusion body. Gross lesions include fetal diarrhea with staining of the hooves; slight edema of the lungs, which remain elastic and normal in color. In the adult there is edema, congestion, and hemorrhage depending on the severity of the case. There is typical necrosis of the walls of smaller muscular arteries not seen in fetuses. The uterus and broad ligaments may be thickened and edematous.

Regulations on California Sales of Farm Medications (William L. Hunter) appears in its entirety elsewhere in this issue.

Scrapie—A Threat to Our Sheep Industry

ARTHUR G. BOYD, D.V.M.

Scrapie is a disease about which we know too little; it is most baffling because it fits none of the usual patterns of infectious diseases.

The long incubation period (18 to 42 months) of scrapie confronts us with a disease that might be classed as one that goes underground and keeps us working in the dark. This feature makes it difficult for us to tell if we are making headway in our eradication efforts.

Scrapie was first reported in the United States in 1947, and during the following 10-year period it has appeared in 62 flocks in 19 states. In addition to the large number of sheep disposed of because of scrapie, many being of valuable breeding lines, in excess of one-half million animals in this country are at present under surveillance due to possible exposure. California has had three outbreaks of scrapie: in 1952, 1955, and 1957. The third and most costly occurrence of scrapie in

sheep in California was during the early part of 1957. In this outbreak, indemnity payments alone made by the federal and state governments exceeded \$400,000. An international cooperative research project on scrapie is imperative.

We could lose the battle against scrapie if a program of expanded research is not undertaken at an early date. We must discover the cause, how it is spread, how to detect it early, the significance of carriers, and an effective treatment.

Viral Pneumonia of Sheep—Some Recent Findings

DONALD R. CORDY, D.V.M., Ph.D.

A distinctive enzootic pneumonia occurring during the summer months is perhaps the most serious disease problem of feeder lambs in California. Morbidity is rather high and survivors make poor gains. Flock mortality is often 5 per cent and may reach 40 per cent. Outbreaks often appear following shipment of feeders.

The etiology of this entity is still not clear. Various bacteria and pleuropneumonia-like organisms have been isolated, but appear to have no primary concern in the disease. In 1952 McKercher recovered a virus of the psittacosis-lymphogranuloma group from 2 of 5 pneumonic sheep lungs by intranasal passage in mice. More recently, Boidin has made additional isolations and studied the experimental disease in lambs.

Virus, *Pasteurella multocida* and pleuropneumonia-like organisms from ovine pneumonia were propagated in eggs and given intratracheally. The agents were given individually and in various combinations. Only groups receiving virus, whether alone or in combination, became sick. Fever, dyspnea and cough appeared the day after inoculation and persisted several days. Coughing and some weight loss persisted until the experiment was concluded. Half of each group of lambs was killed on the fourth day and half at 23 days. Rather extensive consolidation of the anteroventral portions of the lungs were seen at 4 days. Only small foci of chronic bronchiolitis and alveolar collapse remained at 23 days, indicating rapid recovery. The non-viral groups showed no pneumonia at autopsy on either date.

While the experimental virus disease did not entirely reproduce the picture seen in field cases, it was distinctly pathogenic and provides a valuable basis for further investigation.

Anaplasmosis in Deer and Its Possible Relationship to the Natural Disease in Cattle (J. F. Christensen, D.V.M., Ph.D.) Dr. Christensen reported the results of work conducted in collaboration with Dr. John W. Osebold of

REPORT OF CVMA MIDWINTER CONFERENCE

the School of Veterinary Medicine and Merton N. Rosen of the State Department of Fish and Game to determine the transmissibility of *Anaplasma marginale* infection between cattle and deer.

Four adult male Columbian black-tailed deer that had been raised in captivity were inoculated subcutaneously with blood from bovine carriers of *A. marginale*. All 4 deer developed anaplasma infections between the second and eighth weeks following inoculation that were detected by blood smear examination for anaplasma bodies and by rise in complement-fixation titers. In 3 of the deer there was no apparent clinical disturbance associated with these infections, while one deer developed moderately severe anaplasmosis characterized by anemia and weakness. Two splenectomized calves inoculated with blood taken from 2 of these deer after anaplasma infections had been established developed acute, fatal anaplasmosis.

The results of this experiment demonstrate that the common deer of the coastal area of California are readily infected with *A. marginale* by blood inoculation and that this infection may be transmitted back to cattle in typical acute form. Since large areas of rangeland in the western states are occupied by deer, cattle and vector ticks, the possibility exists that wild deer are important carriers of latent *A. marginale* infection.

Newer Bacterial Concepts of Bloat

R. E. HUNGATE, Ph.D.

One of the most striking features of a ruminant is its continuous rapid fermentation of ingested forage. The gas produced (about a half gallon per minute in a 1,000-lb. animal) is eructated by the normal animal but becomes trapped as small bubbles in the rumen contents of animals bloating on legumes. If little gas escapes, the pressure in the rumen can ultimately cut off the circulation and the animal quickly dies.

It has been known for some time that certain rumen bacteria produce copious quantities of slime when cultured on readily available carbohydrates, and a current hypothesis is that this slime causes gas retention in the rumen. This idea is attractive because differences in the kind of micro-organism can account for bloating in some animals, and not in others similarly fed. The finding of Barentine at Mississippi State College that 50 or 100 mg. of procaine penicillin per steer per day is effective in reducing bloat, suggests that microbial activity is vitally concerned.

If the kind of micro-organism is important, control through type of feed should prove feasible. Already Cole and coworkers have shown on this campus that feeding grasses

with legumes significantly reduces the incidence of bloat. Various grasses are not equally effective.

One observation indicates that also non-foamy bloat can occur in animals on a high-grain fattening ration. At Washington State College one steer in a group fed only pelleted feed showed acute bloat which was completely relieved by passing a stomach tube. Examination of rumen contents showed high acidity (pH 4.5). This type would be caused by quite a different mechanism than that due to retention of small gas bubbles. (Condensed from Dr. Hungate's paper.)

The Current Status of Hormones in Fattening Cattle

M. T. CLEGG, Ph.D.

The use of hormones to stimulate weight gains in cattle is, to most feed lot operators, a sound economic practice. There are, however, differences in response which are related to amount of estrogen administered, sex, age at treatment, length of treatment, amount and nature of nutrients, as well as the individual genetic make-up. Furthermore, in some, but not all cases, deleterious effects may be observed. These may be excessive mammary development, staggy conformation, lack of fat covering, vaginal prolapse in the female, enlarged prepuce in the male, and hypertrophy of the male accessory reproductive tissue.

From the results of many investigations, it is now well established that for maximum growth response following treatment, animals should be maintained on a high energy intake. As a generalization, when steers are normally gaining from 1¾ to 2 lbs. daily, stilbestrol implantation will produce a significant increase in gain. The degree of increased gain is to some extent dependent upon dose. Thus, a 15 mg. stilbestrol implant or a 10 mg. daily oral dose is somewhat less effective than a 30 mg. implant. On the other hand, at the lower levels less undesirable effects occur. Only in so far as the effective level following ingestion is much lower than following implantation, there is otherwise essentially no difference in response between either method of administration. In general, the female is less responsive to the growth stimulating effects of estrogen.

The most effective time for treatment appears to be at the beginning of the fattening period. Although suckling calves may show some response following estrogen treatment, these effects do not persist. Steers implanted as suckling calves, again as weaners, and again as feeders made no better gains than those treated only as feeders. Although treated animals gain more rapidly and reach a heavier weight sooner than untreated, they should nevertheless be fed for a longer time

REPORT OF CVMA MIDWINTER CONFERENCE

than normal in order to achieve the degree of finish desired for the higher grading carcass.

Because of individual genetic differences, deleterious effects following treatment may occasionally appear more conspicuous than usual. For this reason, any new hormone product should be thoroughly tested in a large number of animals before it is adequately evaluated.

Banquet. The banquet was held at the Hotel El Rancho, where we took over the entire dining room. The speakers' table was arranged across the windows by the swimming pool. The dinner was excellent, and well served. Dr. Zontine was a gracious toastmaster, and the evening was an unqualified success. After the dinner the group enjoyed dancing until the late hours.

WEDNESDAY

GENERAL SESSION

Diseases of Cats (Jean Holzworth, D.V.M.). Osteogenesis imperfecta (brittlebone) is a hereditary disease of kittens, especially Siamese. It is often misdiagnosed as rickets, but serum calcium and phosphorus are normal. Radiographs show lack of skeletal density with multiple deformity. Callus formation is negligible, in contrast to rickets. Mild cases may be treated with calcium, vitamin D, and rest.

Cerebellar hypoplasia is another congenital condition of young kittens and should not be mistaken for nutritional deficiency or ear mites. It causes nervous incoordination of various degree, leading to stunted growth. The cerebellum is usually reduced in size, and the characteristic finding is reduction in Purkinje cells.

Pyothorax is very common in cats and can occur without apparent cause. There is sudden severe dyspnea and resistance to changes in posture. High fever is frequent and aids in diagnosis; subnormal and normal temperatures are a bad sign. The fluid line is visible radiographically. A variety of organisms may be involved, especially coliform, pseudomonas, proteus, streptococci and staphylococci. In treatment, the thorax is drained and flushed daily, and antibiotics are used. The prognosis is not hopeless, as an occasional cat makes a complete recovery.

A sudden leg paralysis with acute pain may be caused by an arterial thrombus. Retching, mydriasis, cyanosis, rapid respiration and pulse, and subnormal temperature are other signs. Emboli may occur in the central nervous system. The outcome varies from immediate death to complete recovery. Probably the best treatment is rest in an oxygen cage, and systemic antibiotics if acute infection is present.

Closed Circuit Television

Dr. Woolsey and Dr. Theilen demonstrated the collection of vaginal mucus for the vibriosis test. A sterile tampon with 18" string attached is inserted through a glass speculum and left for 20 minutes or more. Then it is withdrawn, put back in its sterile bottle, and sent to the laboratory.

Dr. Hughes and Dr. Asbury demonstrated a device for unaided rumenotomy which seemed very practical. It consisted essentially of a metal square to which the rumen flaps are attached by rumen forceps and clamps. They also demonstrated the collection of specimens for trichomoniasis from the prepuce of a bull, and pudendal block in the bull. Then there were new types of mouth speculums for horses and cattle, Boyd's sling for "downer" cows, and a twitch. All the equipment except the twitch is on the market.

Dr. Hoehner demonstrated his modern application of the Thomas splint. He says swelling of the foot is no problem if the splint is properly designed and fitted, and the bandage not too tight.

Dr. Bramer demonstrated a simple practical mouth speculum for passing a stomach tube in a dog. He used a piece of $\frac{3}{8}$ " or $\frac{3}{4}$ " hard rubber hose about 6 inches long. The dog bites down on this and the stomach tube is easily passed. He also demonstrated the Lacroix enemizer, a cone-shaped nozzle attached to the fluid source is manipulated by a 10-inch handle, keeping the operator clean. He showed the simple method of determining sensitivity of some of the common organisms to drugs.

Dr. Irving Roberts demonstrated plastic catheters, which are both cheap and durable. He also likes the plastic centrifuge tubes. He uses coin envelopes for sterilizing small items like cotton, suture material, etc. He has a clipper grinder and likes it very much; he can get blades sharpened in 15 minutes. He uses a "vaporizer" pen instead of a wax pencil for marking glass, as it is more permanent.

Dr. Wichman and Dr. Vincent demonstrated the handling of pigeons, parakeets, and parrots, and their physical examination. Trichomonas infection is diagnosed by examining a loopful of material from the crop under a microscope.

Dr. Pettit showed some good radiographs illustrating the use of pantopaque. It is not for routine use, but to confirm a doubtful diagnosis or localize a lesion before operation. If used too soon after injury, swelling of the cord may lead to a false impression.

Dr. Wind demonstrated firing the canine stifle. Suitable cases have lameness of rather short duration, only moderate thickening of the joint, and minimal or no exostosis, with no damage to the meniscus.

Dr. Paul routinely feeds new-born pups

and kittens after cesarian section, with a syringe, using about 5 cc. The balance of the formula goes home in a one-ounce dropper bottle to be used until the mother is ready to take over. He demonstrated his Electromatic Power Tool Kit for grinding and cutting teeth. He has adapted a foot switch from a fluoroscope. It is very helpful to grind the large, sharp point from the lower fourth molar after the upper has been extracted. He puts an eyebolt in the wall over every treatment and grooming table; tying the dog to this frees the kennel man for other work. Every hospital needs a standard operating procedure. This he keeps in a binder, and it is used for training of associates, receptionists, and kennel help. He uses test tapes for determining the percentage of sugar (Eli Lilly) or albumin (Ames Co.) in the urine. He has a pushbutton at knee height in his surgery for calling help during aseptic surgery.

Dr. Riddell identifies his patients with a collar of plastic flat tubing, inside which he puts the name on a strip of paper. He also demonstrated his stapling method for hematomas. A scissors type stapler is used, so that the pressure can be controlled. He has a dermal coapter which holds the incision open during operation, and then, turned lengthwise, holds the skin in apposition for suturing. For dosing dogs he uses a plastic catsup bottle.

We were indebted to Allied Laboratories, Inc., Pitman-Moore Company Division, for the closed circuit television, handled by KBET-TV, Sacramento. Drs. Cello and Reid were able moderators.

POULTRY SECTION

TUESDAY

A New Living Non-spreading Newcastle Disease Vaccine

R. A. BANKOWSKI and R. W. WICHMANN

The modification of California 11914 strain of Newcastle disease virus by serial passage through tissue culture using minced chicken embryos suspended in Simm-Sanders medium was described.

The intramuscular route of administration of the vaccine was found to be the route of choice. One dose of the vaccine given to susceptible chicks at five days of age or over induced an immunity lasting at least 12 weeks. Two doses from 7 to 9 weeks apart have resulted in a high degree of immunity which was still evident 56 weeks later. Use of the vaccine on susceptible layers resulted in immunity without causing any drop in egg production.

Approximately 40,000 chickens of all ages have received the vaccine intramuscularly without any respiratory or nervous symptoms resulting from its use. The vaccinated birds do not transmit the infection to susceptible pen mates.

JANUARY-FEBRUARY, 1958

Colonel Richard G. Yule, Veterinarian, Sixth Army

Colonel Richard G. Yule reported at the Headquarters, Sixth U. S. Army, in July, 1957, for duty as Veterinarian Sixth U. S. Army, relieving Colonel Russell McNellis, VC, who



COL. RICHARD G. YULE

was transferred to duty in the Veterinary Division, Office of the Surgeon General, Department of the Army. Colonel Yule was born in Fort Collins, Colo., and graduated from the Veterinary School, Colorado State University in 1931 with a degree of D.V.M.

Upon graduation he came to California and entered joint practice in Bakersfield. In August, 1932, he accepted appointment as Second Lieutenant, Army Veterinary Corps, with station at Presidio of San Francisco.

Between 1934 and 1941 he served as Assistant Veterinarian, Fort Meyer, Virginia; Station Veterinarian, Fort Moultrie, So. Carolina, and Fort Leavenworth, Kansas. In 1941 he was assigned to the Air Force as Veterinarian, First Air Force Headquarters, Mitchell Field, Long Island, and served with the Air Force until October, 1943, when he was assigned as Army Veterinarian, First Army, Headquarters Europe. He returned to the United States for assignment as Veterinarian, Camp Blanding, Florida, July, 1945.

Colonel Yule was assigned as Senior Veterinary Advisor, U. S. Military Advisory Group, with headquarters at Nanking, China, in May, 1947. In this capacity he acted as veterinary advisor to the Chinese Nationalist Army. In 1949 he returned to this country for assignment as Station Veterinarian, Fort Bragg, No. Carolina.

In July, 1952, he was made Chief Veterinarian, Headquarters Quartermaster Inspection Service Command, New York City, and in June, 1953, transferred to duty as Veterinarian, Headquarters First U. S. Army, Governor's Island, N. Y.

Colonel Yule comes to the Sixth Army with a wide and excellent war time and peace time record and experience; highly qualified for the assignment, and the veterinarians in this area are very fortunate that a man of his experience and ability is assigned to the Sixth Army for consultation when needed.

Dr. J. V. Lacroix Awarded 50-Year Service Pin

Dr. J. V. Lacroix was awarded a 50-year service to the profession pin at the 75th annual convention of the Illinois State VMA. Following is a biographical sketch of some of the highlights of his career:

Dr. Lacroix was born on a farm near Hiawatha, Kansas on July 31, 1882. He received his preliminary education under French tutors and in a country school in Brown County, Kansas, and graduated from the Kansas City Veterinary College in 1906.

After practicing veterinary medicine in Hiawatha, Kansas from 1906 to 1911, he was employed on the faculty and clinical staff of the Kansas City Veterinary College until December, 1917. The first world war interrupted his career and he spent the following year in service for the army. In 1919 he resumed his practice of veterinary medicine locating in Evanston, Illinois and continued until June, 1949.

In early 1920 Dr. Lacroix founded the North American Veterinarian and worked in the veterinary publishing field until October, 1956. Dr. Lacroix was an active participant in organized veterinary medicine in several capacities throughout his career and recalls that during these busy years his itinerary also included a number of civic and social organizations in Evanston and Chicago.

At the present time, Dr. Lacroix is occupied part-time on the staff of the American Veterinary Publications, Inc., but his chief personal interest is in collaboration with a number of individuals and organizations in the defense of Christian Americanism.

Hazards of Fluoroscopy Almost 50 Per Cent Morbidity

Of the veterinarians in the New York area using fluoroscopes, 75 were selected at random for study. Radiation lesions were found only in those who had been in practice more than ten years. Of these 46, striations or splitting of the nails was found in 15, 9 of whom were less than 45 years old. Five of these men, and four without nail involvement, had skin manifestations. Two had erythema about the nail beds; two, ulcerations; two, ulcers and keratoses; one, erythema, ulcers, and keratoses; and one, ulcers and an epithelioma. In four, skin grafts were necessary after excision of the affected areas; in two, amputation of one or more phalanges was necessary.

The exposure comes mostly from carelessness, but partly from poorly operating equipment. Equipment should be checked annually, and periodic physical examinations should supplement use of proper protective devices.—Messite et al., Arch. Indust. Health, 16:48, 1957.

The Editor . . .

The **Calo Dog Food Co., Inc.** is justifiably proud of its new plant in Oakland. It is a scientifically modern plant with a network of electronic equipment installed to take the guesswork out of cooking. Trained technicians watch every operation in the brisk, clean cannery in order to assure uniformity of sterilization and quality control of all Calo products. This careful attention has been given to the company's products for more than 30 years. Veterinarians are invited to visit the plant, located at 175 Embarcadero, Oakland. Read their advertisement and see what goes into Calo's nutritious diet.

* * *

There's a free copy of a handy Veterinarian Daily Record Book waiting for you at **Haver-Lockhart Laboratories**. It has hour-by-hour, day-by-day record of client names, service performed, fees, payments and room for monthly cash account, record of tax deductible payments, income tax summary, and other handy facts, including laboratory and supply records. All you have to do to get this book is to ask your Haver-Lockhart man, or write to the firm in Kansas City, Mo. You'll find it is one of the handiest books you ever owned.

* * *

Norden Laboratories features Iomycin in this issue. Iomycin is an entirely new antibiotic for intramuscular administration with unusual effectiveness in the treatment of mastitis and respiratory infections including: calf pneumonia, shipping fever and feline and canine pulmonary infections. I provides up to five times more respiratory, mammary tissue concentration than penicillin G. The Lincoln, Nebraska, firm maintains three branches in California: the Norden Sacramento Branch, California Veterinary Supply and Valley Veterinary Supply.

* * *

Cutter Laboratories says: Next, vaccinate with either Alhyrdox fortified vaccine Blacklegol "S" or Blacklegol "S-HS." Blacklegol "S" protects against both blackleg and malignant edema for little more than the cost of blackleg vaccine alone. Blacklegol "S-HS" gives this same top protection plus seasonal shipping fever resistance too. For more information on blackleg, malignant edema and shipping fever, write Cutter Laboratories, Berkeley, Dept. 110B, for your Cutter Catalog.

* * *

Hard Hitting Statomycin, says **Corn States Laboratories, Inc.** is the ideal practice antibiotic—indicated for treatment of infections of the respiratory, gastrointestinal, and genitourinary tracts, and for septicemias or local infections. Their Statomycin, I. M. is the intramuscular form which rapidly produces a high antibiotic concentration in the tissues. Statomycin

Reviews Ads

mycin is supplied in tablet form, 100 and 250 mg., and also in a tablet combined with three sulfas. Statomycin, I. M. is supplied in 10 cc. vials.

* * *

Parke, Davis & Company has reprints available on Chloromycetin which have appeared in leading veterinary publications—among them **THE CALIFORNIA VETERINARIAN**. Some of these titles are: "The Clinical Use of Chloromycetin in Dogs and Cats," by Dr. R. G. Schirmer, Dr. F. E. Eads and Dr. J. P. Newman, reprinted from "Veterinary Medicine." Also: "Bovine Blood Serum Concentrations of Chloromycetin Following Intramuscular Administration," by Dr. F. E. Eads and Dr. K. D. Van Nocker, which was reprinted from **THE CALIFORNIA VETERINARIAN**. Write Parke, Davis & Company, Detroit 32, Michigan, for reprints.

* * *

Schering Corporation tells of two products: Meticorten and Trilafon, in separate advertisements in this issue. In ketosis, one Meticorten treatment gets results. It restores milk production, raises blood sugar levels to or above normal, decreases blood ketones, and one treatment usually is sufficient. Trilafon, they state, is therapeutically unsurpassed in clinical practice as a tranquilizer . . . an antiemetic . . . a preanesthetic potentiator. It benefits owner, patient and veterinarian: the last named by providing him with further opportunity to demonstrate his highest degree of professional skill and ability.

* * *

Fromm Laboratories, Inc. uses a color advertisement to advise you that vaccines and serums bearing the name **FROMM** are produced under the most rigid standards by specialists in small animal diseases. "The quality of each vaccine and serum must exceed every test for purity, potency and safety," they state. How is your supply of "Life With Rover" booklets? If it is low, write them at Grafton, Wisconsin, for additional copies. Dog owners will enjoy this informative 8-page booklet on the ancestry, diet and health-cure of dogs.

* * *

With the headline: "Don't Let the Patient Ruin Your Treatment!" **Warner-Chilcott Laboratories** advises the use of Paxital, the safe, nonsedative animal tranquilizer. A routine administration of Paxital lets your treatment do its job; helps prevent self-mutilation. It controls anxiety and apprehension, quiets the patient yet keeps him alert. And used pre-operatively, it actually potentiates the action of anesthetics. Available only through ethical veterinary distributors, Paxital is packaged in 50 and 100 mg. tablets in bottles of 100 or 500; 10 cc. (25 mg./cc.) multi-dose, rubber-capped vials.

Stress Research Discussed at Veterinary Conference

The importance of stress as a factor in increasing the overall cost of livestock production and lowering meat quality and the possibility of using tranquilizers in controlled doses to combat these stress effects were the subject of a day-long discussion by 11 leading veterinary authorities, at a Research Conference held in Kansas City on December 10th. The conference was sponsored by Jensen-Salsbery Laboratories of Kansas City, which has been doing experimental research on the effects of tranquilizers in enabling livestock to adapt itself to common stress conditions. More than 150 veterinarians and several livestock producers attended the conference.

Research scientists from Jensen-Salsbery, the conference - sponsoring pharmaceutical house, described their experimental work with DiQuel, a new phenothiazine type tranquilizer designed exclusively for use in the veterinary field. Already approved by the USFDA for use on livestock by veterinarians, DiQuel combines tranquilizing with anti-histaminic properties and in normal dosage by injection has a lasting effect of from two to three days.

Veterinarians, stock producers and representatives of packing houses, railroads and farm publications came from as far away as San Francisco and New York to attend the conference. Dr. A. H. Quin, former president of the American Veterinary Medical Association, acted as chairman and Dr. Carl Brandly, dean of the University of Illinois School of Veterinary Science, presided over the panel discussions which followed the formal presentations by the researchers. Authorities who gave their findings to the conference included Dr. Hayes, Dr. Roy E. Nichols of the University of Wisconsin; Dr. Nelson B. King of the Ohio Experiment Station at Wooster, Ohio; Dr. Alvin B. Heorlein, University of Illinois; Dr. Harold B. Hedrick, University of Missouri; Ray Cuff, regional director of Livestock Conservation, Inc.; Dr. A. R. Haskell, S. K. Sinha, C. M. Cooper and M. D. Sutter of Jensen-Salsbery Laboratories. C. M. McCallister, president of the host firm, was the luncheon speaker in the ballroom of the Muehlebach Hotel.

Established Brucellosis Control Areas

The Brucellosis Area Certification regulation, Section 754.4 of the California Administrative Code, was amended on December 13, to read as follows:

Established Brucellosis Control Areas: Alpine, Butte, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lassen, Marin, Modoc, Mono, Nevada, Placer, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity and Yuba.

As of that date 21 counties of California are included.

Fifty-fourth Annual Report of the State Board of Examiners in Veterinary Medicine, 1957

Department of Professional and Vocational Standards

Letter of Transmittal

To his Excellency, Goodwin J. Knight,
Governor of the State of California,
Sacramento, California.

Your Excellency:

Conforming with the provisions of Section 4810 of the Business and Professions Code of the State of California, William E. Barbeau, Executive Secretary of the Board of Examiners in Veterinary Medicine for the State of California, has honor of presenting for your consideration the fifty-fourth annual report, showing the activities of this branch of the State Government for the calendar year of 1957.

Respectfully submitted,

WILLIAM E. BARBEAU, *Executive Secretary*,
Sacramento, California
December 31, 1957.

Officers and Members of the Board

President, Dr. William J. Zontine, Lancaster.

Vice President, Dr. Philip L. McClave, Reseda; Dr. William K. Riddell, Los Angeles; Dr. Richard B. Tangeman, Susanville; Dr. Gaylord K. Cooke, Berkeley.

Investigator, Mr. Leo E. Wells, Sacramento.

Executive Secretary, Mr. William E. Barbeau, Sacramento.

During the current year the term of Dr. R. A. Ball of Modesto expired and Dr. Richard B. Tangeman of Susanville was appointed to fill the vacancy thus created.

Meetings

During the year 1957 the Board of Examiners in Veterinary Medicine held the following meetings:

January 24, 25, 26.....	Davis
June 13, 14, 15	Davis
August 27 (Special Meeting) ..	Pasadena
October 24 (Special Meeting) ..	Los Angeles

Examination Statistics

Date	No. Participating	No. Passed	No. Failed
January 24, 25, 26	28	22	6
June 13, 14, 15	112	105	7

Successful Examinees

Davis, January 24, 25, 26

Aaron, Edward	Jacobsen, Carl Edward
Atwood, Carlton Asbury	Leininger, Frederick George
Bauer, Albert Irwin	Miller, Robert M.
Blanchard, Harry F.	Plymale, Harry Hambleton
Councilman, Joseph W.	Ray, Benjamin Burke
Cramton, Kenneth Gerard	Schmitz, Richard D.
Denholm, Byron Eugene	Scott, Frank S.
Dodson, Robert Colliver	Stucki, Bruce
Downs, Marvin Heube, Sr.	Sylstra, Anthony Wayne
Gourley, Ira M. (Gary)	Ward, Chester J.
Gregg, J. H.	Wiley, John J. B.

Davis, June 13, 14, 15

Ader, Janis M.	Knorr, Gordon E.
Arden, John	Kuller, Harry William
Asmus, Robert Calvin	Lammers, Victor, Jr.
Bailey, Harvey D.	Larson, Robert Edwin
Barnes, H. Erik	Lindstrom, Robert Alvin
Barnett, David R.	Lippincott, Charles L.
Bartlett, Frank E.	Malone, George Patrick
Behrends, Kenneth R.	Martinelle, Lido
Biggers, Alon J.	Mason, Roy E., Jr.
Boman, Alf Eric	McBride, Douglas Frank
Bond, George Havely	McDowell, Jack Duane
Burns, Melvin C.	McFadden, William Roger
Burr, Gordon Richard	McWhorter, Thurmond
Burton, Thomas	Murray, William J.
Campbell, Kirby I.	Nevin, Edward A.
Catcott, Earl J.	Norris, Hugh B.
Clark, Gerald McMillen	Otto, Robert W.
Conger, Gerald B.	Popish, John R.
Cook, Robert Blair	Porter, Carlton E. Sr.
Crawford, Edwin Dickey, Jr.	Priester, William Alfred, Jr.
Davis, Eugene Loren	Prock, P. Eldon
Davis, James William	Puckett, John Ralph
Decker, Warren Eugene	Rasmussen, Chester Charles
Des Marteau, Phillip D.	Samuelson, Marvin L.
Dingwall, Harry Arnold	Sanford, Janet C.-W.
Dorius, Gay E. Bond	Schauwecker, Thomas G.
Dorius, Lowell Clyde	Selby, Arthur William
Fall, Frank J. Jr.	Shapton, Donald Cameron
Farrell, Valentine P.	Simpkin, John Mark
Galbreath, David A.	Smith, Alvin W.
Gatz, Earl E.	Smith, Vern R.
Gould, Thomas A.	Spencer, Tom K.
Gregory, Jack C.	Squires, Richard Gary
Haines, Richard Jay, Jr.	Taylor, Robert E. Lee
Hallowell, Alfred L.	Thackeray, Dean Joseph
Heath, Theodore Douglas	Tierce, Millard L.
Hewitt, Harold Zane	Tong, Alexander C.
Hill, Edward J.	Toulouse, Arlie George
Hopkinson, Hubert L., Jr.	Tuttle, William Pierce
Horn, Richard C.	Ugialero, Antonio
Howard, Richard Ian	Vanderhoof, Clark D.
Huckfeldt, Robert E.	van Dijk, Leo J.
Hull, Richard H.	Vincent, Douglas Jack, Jr.
Humason, Ronald Wilds	Waltermire, Richard D.
Hur, Donald Edwin	Warner, Horace Emory
Jackson, Larry Alvin	West, E. John D.
Jinneman, Charles L.	West, George Beal E.
Johnstone, Hubert Crosby	Wilcox, Robert F.
Kaiser, Francis Earl	Winchester, Jack E.
Kalantar, Levon	Wolfer, John Jere
Kalitz, Gene Anthony	Wright, William D.
Kaufmann, Jonathan	Zosel, James Raymond
Kendall, Leland Dale	

Law Enforcement

During 1957 there were 74 complaints received; 62 complaints investigated; 2 arrests and convictions of unlicensed persons; 2 administrative hearings are pending; 2 licensed veterinarians were ordered to appear before the Board; 50 warnings were issued to licensed veterinarians; 1,085 contacts made with veterinarians; 369 veterinary hospitals inspected.

All cities, towns and villages in California were visited and investigations made to determine if any violations of the veterinary laws had been incurred. This included calls on hundreds of feed yards, drug stores and all places where information might be obtained.

* * *

All registrations and finances are handled through the Department of Professional and Vocational Standards in Sacramento.

Number of licensed veterinarians	
as of December 31, 1957	1709
Number of licensed veterinarians	
in the Armed Forces	56

Abstract of Los Angeles County Livestock Department Annual Report

A perusal of the 1956-1957 annual report of the Livestock Department of the County of Los Angeles, California, over the signature of Dr. Robert J. Schroeder, livestock inspector, shows that this department has completed 32 years of service to that county with the year 1956-1957, since being established through the efforts of Dr. L. M. Hurt in 1925, following the disastrous outbreak of foot-and-mouth disease in the state in 1924.

According to this report, which presents many interesting and significant facts and data on subjects coming under its jurisdiction, the department points out that Los Angeles County ranks third among the 3,070 counties in the United States in production of farm products with an income value of \$170,452,387—it is surpassed by two other counties—Fresno and Kern.

Fifty-eight per cent of farm income in Los Angeles County is now derived from livestock, Los Angeles County ranking first in number of dairy cows, milk production, and total value of dairy products sold. It ranks number two in value of poultry and poultry products, third in cattle and calves sold, and seventh in cattle and calves on farms.

Horse population is estimated at 28,290 and dogs at 500,000.

Emphasizing that rigid inspections, prevention, recognition, and control of infectious diseases is possibly in part responsible for the figures quoted, the report compares a County so free from infectious diseases with many areas of the world where such, or comparable diseases are not controlled. It is stated that increased world travel and decreased travel time have proven to be two hazards that have made necessary strict vigilance against the dangers of introductions of infections. Border control is not the entire answer—well-trained regulatory agencies must be maintained.

Scrapie in sheep has been found in the county among other things, and constant surveillance is maintained for the presence of tick fever and vesicular exanthema which last, although it has not been found in the county since the summer of 1955 can be very elusive. Credit is given to the cooking of garbage and constant vigilant inspections for such absence, and the same argument is advanced for the absence of Trichina.

The dairy industry in the county produces 1,210,849,000 pounds of whole milk yearly—24 per cent of the total market milk in the state being produced in this one county. The trend is toward larger dairies which makes for more complex operation ipso facto calls for intensification of disease control measures.

Tuberculosis control activities show the importation of 60,646 animals as replacements

during the year, and the testing of these showed only 58 animals reactors—a .095 percentage.

Brucellosis control procedures are described and the laboratory of the Los Angeles County Livestock Department (one of the few approved by the federal and state governments to conduct such serological tests) cites the conduction of 7,169 tests, divided into bovine, caprine, ovine, porcine, and water buffalo classifications with a result showing 6,012 negatives, 419 positive, and 743 suspects.

Such subject as Infectious Bovine Rhinotracheitis, Equine Influenza, Molybdenum poisoning, and fair and livestock show inspections are well covered.

Interesting are the figures on "Hardware Disease" in cattle. Of a total of 3,618 bovine necropsies "foreign body" was diagnosed in 1200—a percentage of 33.17 per cent—which seems to suggest that here should be stimulus for a definite program for elimination of cause on the part of the dairy and beef industries.

Mastitis control is well covered, programs and procedures described, the keeping of records on all programs being emphasized as being extremely important.

There was 18,400,000 pounds of pork, valued at \$2,944,000, produced in Los Angeles County during the year, and 2,374 inspections were made on swine raising establishments.

Hog Cholera and Swine Erysipelas come in for their share of discussion as does the poultry industry and miscellaneous services. Under the last heading is included the laboratory and autopsy work in conjunction with the Los Angeles Griffith Park Zoo—this is not only a necessary service to the City of Los Angeles, but is the source of many educational ramifications for both sides—it is well known that such a service is of inestimable value to such a civic enterprise and very possibly could be copied by other communities where a like endeavor is established or in contemplation, with mutual benefit.

A discussion, and tables of laboratory work done during the year, together with remarks on a radiological defense course which was attended by the personnel are interesting.

Rabbit and fur farming are discussed, pointing out significant values.

Enforcement of ordinances and public relations are two of the closing chapters in a well-presented report.

One suspects that this particular organization enjoys a rather close and deep relationship with the average local practitioner and vice versa, which is as it should be—one would indeed be very blind not to see the advantages of such a liaison.

CHARLES H. REID, DVM

Laboratory Notes

From the Department of Clinical Pathology, School of Veterinary Medicine, University of California.

The settling of erythrocytes in plasma is associated with the aggregation by the red cells into rouleaux (chains) or agglutination (clumps). The formation of such aggregates reduces the total exposed surface area of the red cells and increases their rate of sedimentation. The extent to which rouleaux formation normally occurs varies with the species. It is most marked in the horse, whose erythrocytes exhibit a rapid rate of sedimentation. The red cells of the cow show very little tendency to adhere in chains or clumps; the cells remain dispersed in the plasma, and no settling occurs during the one hour observation period. The erythrocytes of man, dog, cat, and pig show varying degrees of rouleaux formation with associated sedimentation; the rates have been observed to vary with disease states. It is in this latter group that the erythrocyte sedimentation rate (ESR) has proved a useful tool in estimating the extent of a pathologic process.

The ESR is performed using the Wintrobe hematocrit tube and oxalated blood (Heller-Paul anticoagulant, CALIFORNIA VETERINARIAN, May-June). The tube is filled to the zero mark at the top of the left hand millimeter scale and placed in an exactly vertical position. At the end of one hour the upper level of the red cell mass is recorded in millimeters of sedimentation per hour by reading the left hand scale. This is the observed erythrocyte sedimentation rate. The test must be started within the first hour after the blood has been drawn, aging of the sample results in a slowing of the rate of settling of the red cells. The tests should be conducted at room temperature (as nearly uniform as possible): low temperatures decrease and high temperatures increase the rate of sedimentation. The tube must be vertical; if it is not perpendicular, the rate of settling of the erythrocytes is increased.

Certain tests will show a top clear zone of plasma followed by a reddish hazy portion which merges gradually into the main mass of settling red cells (CALIFORNIA VETERINARIAN, Sept.-Oct. 1957). This is referred to as a diphasic sedimentation rate; the intermediate zone contains red cells which have not formed rouleaux. Such a test usually indicates the presence of reticulocytes or young red cells associated with increased erythropoiesis. This may occur following blood loss or increased red cell destruction (hemolytic disorders). A diphasic reading occasionally indicates the presence of numerous erythrocytes of abnormal morphology.

After the ESR has been read, the Wintrobe tube is centrifuged to determine the packed cell volume (PCV), (See CALIFORNIA VETERINARIAN, Sept.-Oct. 1957 for proper time and speed of centrifugation). The PCV is read in

millimeters from the right hand scale and is customarily expressed directly as a per cent.

An important factor influencing the magnitude of the ESR is the relative volumes of plasma and erythrocytes per unit volume of blood. As the size of the red cell mass decreases, the rate of sedimentation increases, provided the erythrocytes are of normal morphology. For this reason, a practice has been made of correcting the observed ESR with respect to the PCV. The accompanying table gives values for the anticipated rate of fall for each PCV from 9.0 to 50. This is the rate at which erythrocytes will be expected to settle normally in plasma on the basis of relative volumes of cells and plasma. The corrected ESR may be expressed as the difference between the observed and the anticipated rate; it is expressed as plus if the former is greater, as minus if the latter is the larger figure.

Anticipated PCV	ESR.	Anticipated PCV	ESR.	Anticipated PCV	ESR.
9	82	23	40	37	14
10	79	24	38	38	13
11	76	25	36	39	12
12	73	26	34	40	10
13	70	27	32	41	9
14	67	28	30	42	8
15	64	29	28	43	7
16	61	30	26	44	6
17	58	31	24	45	5
18	55	32	22	46	4
19	52	33	20	47	3
20	49	34	19	48	2
21	46	35	18	49	1
22	43	36	16	50	0

Record results as follows: Observed ESR/anticipated ESR = + or —

Examples: PCV 43, E.S.R. 45/7 = + 38, inflammatory process or new growth.

PCV 22, E.S.R. 43/43 = 0, non-inflammatory disease.

PCV 24, E.S.R. 16/38 = — 22, abnormal red cell morphology as seen in reticulocytosis, and in chronic advanced depression of erythropoiesis; also in hepatopathy, or blood sample more than one hour old.

In general, the magnitude of the corrected sedimentation rate is a reflection of the severity of the disease process. At the extremes of the range of PCV values (less than 20 and greater than 40%), smaller increases in the corrected ESR have as much significance as larger corrected values in the PCV range of 20 to 40%; and, since the ESR is normally zero at a PCV of 50, or greater, any observed settling of the red cells in this range is indicative of abnormality.

The increased sedimentation rates observed in disease are a reflection of an alteration, resulting from the disease process, in the composition of the blood plasma. Certain plasma proteins increase the rate of settling of the red cells; the increased amounts of fibrinogen produced by the liver during inflammatory dis-

ease cause agglutination of red cells (sludged blood). Globulin increases red cell aggregation; albumin is believed to effect greater suspension stability.

The ESR provides information of a general nature correlating with other diagnostic findings, e.g., elevation of body temperature or abnormal leucocyte counts. The test is particularly useful in detecting occult disease and as a guide to the extent and intensity of a morbid process. An elevated ESR is to be anticipated in inflammatory disease involving the skin, muscles, bones, internal organs and serous surfaces. It is not necessarily elevated if the inflammation is limited to the mucous membranes of the respiratory, gastro-intestinal, or genito-urinary tracts. An elevated ESR in neoplasia suggests malignancy, although a significantly elevated rate may not be found in leukemia. Traumatism, extensive burns, surgery involving much cutting of tissue, such as ear surgery and enucleation of the eyeball, produce elevated corrected sedimentation rates.

The ESR is especially applicable to canine and feline bloods and should be performed routinely in all cases in which the hematocrit is being determined. The test is valuable in prognosis; a disease should not be considered arrested until the ESR begins to decline to the normal anticipated rate. Repetition of the test during the course of treatment and observation of a patient is of value in determining the progress of recovery.

O. W. SCHALM
VIRGINIA GILMORE

Streptdust Announced: Controls Air Sac Infections in Chickens

A dusting formulation of streptomycin sulfate for the control of chronic respiratory disease or air sac infections in chickens has been introduced by Pfizer Laboratories Veterinary Department.

Trade-named Streptdust, the antibiotic formula is sprayed as a dry dust over the heads of infected flocks in a dark, confined area. One bottle (47 grams) treats up to 1,000 birds, and a single treatment is usually enough to wipe out the organisms involved.

Two other advantages of the product were cited by Jackson S. Gouraud, Pfizer veterinary manager. Streptdust acts rapidly, he said, since it is inhaled directly to the site of infection, the air sacs. It may be administered easily with an inexpensive hand dusting device.

Applicants

William G. Rowe, Santa Rosa. Vouchers:
L. F. Conti, R. E. Duckworth.

Ernest Williams, El Monte. Vouchers:
C. H. Ozanian, Davis Splaver.

George J. Freiermuth, Hollister. Vouchers:
C. S. Brooks, Jay D. Hoop.

JANUARY-FEBRUARY, 1958

Livestock Diseases Reported

E. F. Chastain, D.V.M.

Tabulation of Diseases Reported to the State Bureau of Livestock Disease Control during the period September to December, inclusive, 1957.

	Sept.-Dec. Incl. 1957		
	North	Central	South
Actinomyces		3	
Anaplasmosis	4	2	7
Anthrax, Cattle			
Sheep			
Blackleg			
Bluetongue	34	4	3
Bovine Bacillary Hemoglobinuria	1	3	
Coccidiosis, Cattle			
Sheep			
Contagious Ecthyma, Sheep	1		
Cysticercus Bovine	5	18	44
Encephalitis, Bovine			
Equine Encephalomyelitis	7	1	1
Equine Infectious Anemia			
Equine Virus Abortion			2
Erysipelas, Sheep	1		
Swine	2		
Foot Rot, Cattle			
Sheep			
Hydroplasia, Lambs			
Hog Cholera	1	1	1
Infectious Atrophic Rhinitis			
Johnes Disease, Cattle		1	
Sheep	1		
Leptospirosis, Cattle	55	89	8
Horses		2	3
Sheep			
Swine	1	9	
Listeriosis, Cattle			
Sheep			
Malignant Edema			
Malignant Catarrhal Fever			
Musculos Diseases			
Paratyphoid, Cattle	1	5	3
Horses			
Sheep			
Swine	1	2	1
Psoroptic Scab, Cattle			
Sheep			
Rabies, Bovine			
Rhinotracheitis			5
Sarcoptic Scab, Cattle			
Swine			
Serapie			
Sporadic Bovine Encephalomyelitis	1		
Transmissible Gastro Enteritis, Swine		1	
Vesicular Exanthema			
Virus Diarrhea, Cattle			
Vibrio fetus, Cattle	2	4	2
Sheep		1	

ELECTION BALLOTS

Have been mailed. Please cast your
vote, sign, and return immediately.

A Post-Graduate University Extension Program for Veterinarians

BENNETT J. COHEN, *University of California Medical School, Los Angeles*

Post-graduate courses in the basic and clinical sciences have been available to Los Angeles area veterinarians since the spring of 1956. What started as an effort by a few local practitioners to participate in the regular post-graduate medical education program of the University of California Extension has now developed into a specific university extension program for the veterinarians themselves. With the cooperation of the University of California at Los Angeles, School of Medicine; Medical Extension, University Extension; the School of Veterinary Medicine; and the Los Angeles County Veterinary Medical Association, courses now are offered semi-annually. The response has been exceptionally fine, with every class over-subscribed. This interest is a reflection of the desire of local veterinarians to keep pace with newer developments in their field.

The courses are given for 8-10 weeks in the fall and spring, consisting of one two-hour meeting per week in the evening. A nominal fee is charged to cover the costs of arrangements and faculty. Classes are limited approximately to 25 persons to facilitate group discussion. To date, the following courses have been offered: Pathological Physiology for Veterinarians (twice); Special Problems in Veterinary Virology, Parasitology, and Mycology; and Selected Topics in Veterinary Radiology, Pathology, and Endocrinology. Offerings in Pharmacology, Special Surgery, Clinical Pathology, and Ophthalmology, among others, are planned for the future.

At the conclusion of each course, the students are asked to submit critical evaluations including comments on the quality of the program and speakers. These evaluations have proved useful in planning additional programs. Although the overall reaction has been highly favorable, two interesting criticisms have been made. It has been suggested that the basic science information thus far presented has been too theoretical for the day-to-day needs of the practitioner. Further, since most of the faculty have consisted of medically trained people, there has been some feeling that the courses lacked veterinary orientation. These criticisms reflect some of the problems inherent in offering veterinary courses outside of a veterinary school. They merit consideration and study.

One approach to these criticisms may be to include outstanding local practitioners regularly as members of the faculty for a given course. They would be expected to participate formally, offering clinical presentations of academic quality. This would supplement and complement more basic in-

formation presented by other members of the course faculty. Hopefully, this approach will provide a balanced orientation, with no sacrifice in course quality. To this end, Medical Extension has requested the Los Angeles County VMA to appoint a liaison committee. The committee will be asked to advise on programming future courses and to recommend qualified practitioners to contribute in their areas of clinical specialization. The continuing objective of this program is to improve the post-graduate educational opportunities available to practitioners at the local level. Its success may lead other veterinary groups to develop similar programs in their own localities.

Armour Introduces Antrate H. C.

In the first major development in 50 years of treating hog cholera, the Armour Veterinary Laboratories announces the introduction of a concentrated hog blood fraction that is twice as potent as anti hog cholera serum.

Called Antrate H. C., the new material is made by fractionating the blood of hyperimmune hogs thus eliminating all but that portion which contains the important disease fighting antibodies.

The new method permits the standardization of antibody content and the elimination of side reactions, according to John O. Gwin, sales manager of the Armour veterinary division.

For the veterinarian it means faster vaccination for a given number of hogs since only one half as large a dose of Antrate as compared to serum is needed to fully protect the animal. Antrate also is more viscous than serum and will not leak back through the needle wound in the skin.

As with serum, the Antrate must be used simultaneously with hog cholera virus or modified vaccines in order to obtain permanent immunity. It may be used alone for temporary immunity.

Upjohn Announces Veterinary Division.

The formation of a Veterinary Division within The Upjohn Company has been announced by Donald S. Gilmore, Chairman of the Board and Managing Director of the pharmaceutical firm.

The new division headed by Gordon G. Stocking, D.V.M., was formed by the consolidation of four departments: Veterinary Medical, headed by J. L. Davidson, D.V.M.; Veterinary Sales, managed by S. P. Hurley; Veterinary Research, headed by H. S. Bryan, D.V.M.; and Veterinary Advertising, headed by W. J. Upjohn.

Cattle Scabies Regulation (Amended; effective, December 5, 1957)

In accordance with provisions of the Administrative Procedure Act (Government Code, title 2, division 3, part 1, chapter 4) and pursuant to the authority vested by sections 16 and 211 of the Agricultural Code of California, W. C. Jacobsen, Director of Agriculture, hereby amends regulations in title 3, California Administrative Code, as follows:

Amends section 757 to read:

757. Cattle Scabies Regulation.

(a) **Permit, Treatment and Certification Required for Entry of Cattle into California from the State of Kansas and the Counties of Baca, Bent, Costilla, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers and Pueblo in Colorado.**

On and after the effective date of this regulation, no cattle shall be brought into California from the State of Kansas and the Counties of Baca, Bent, Costilla, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers and Pueblo in the State of Colorado unless accompanied by a permit issued by the Bureau of Livestock Disease Control, California Department of Agriculture, and an official health certificate certifying that the cattle are free from scabies and that they have been treated in a manner approved by the United States Department of Agriculture or the California Department of Agriculture. The certificate shall be signed by a federal or state veterinarian and shall show the method and number of treatments, and the date or dates of treatment. The treatment referred to herein shall be completed within ten days prior to the date the cattle arrive in California.

The request for permit required herein shall include the name and address of the consignor and the consignee, the number and breed of cattle and the exact place of origin and destination.

(b) No Diversion.

Cattle originating from the State of Kansas and the Counties of Baca, Bent, Costilla, Crowley, Huerfano, Kiowa, Las Animas, Otero, Prowers, and Pueblo in the State of Colorado referred to in this section shall not be diverted enroute without first obtaining permission from the Chief of the Bureau of Livestock Disease Control of the California Department of Agriculture.

(c) Disposition of Permit and Certificates.

A copy of the certificate referred to in this section shall be mailed forthwith to the Bureau of Livestock Disease Control, Department of Agriculture, State of California, Sacramento 14, California.

A copy of the permit and certificate referred to in this section shall accompany each lot or shipment, and if shipment is made by common carrier, such copies shall be attached to the waybill or bill-of-lading.

The provisions of this section are in addition to other requirements pertaining to shipment of cattle into the State of California.

This order shall take effect at the time and on the date it is filed with the Secretary of State as provided in Section 11422 (c) of the Government Code.

(Seal of the State of California Department of Agriculture)

NOTE: This Cattle Scabies Regulation was approved and proclaimed by Governor Goodwin J. Knight and filed to become effective December 5, 1957, as an emergency regulation.

Nation-Wide Examinations for Veterinarians

To meet the continuing need for veterinarians in California, the California State Personnel Board has scheduled a series of nation-wide examinations.

The first of the new year's examinations—for Veterinarian I, Disease Control and Pathology, and Veterinarian I, Meat and Poultry Meat Hygiene—is scheduled for February 25.

Both positions require a doctor's degree in veterinary medicine from a recognized veterinary college. Students in their final year in such a college may take the examination but they must have the required degree before they are eligible for appointment.

Applicants who qualify for Veterinarian I, Disease Control and Pathology, must also obtain a California license to practice veterinary medicine within a year of appointment.

These positions, which pay from \$530 to \$644 a month, are the entry levels in a series of classes covering a wide variety of veterinary work throughout California. Promotion is to the class of Veterinarian II, with a salary range from \$556 to \$676. Veterinarian III pays from \$613 to \$745.

For further information and official application form, write the State Personnel Board, 801 Capitol Avenue, Sacramento 14, California.

Mastitis Symposium Scheduled for Chicago

How to control mastitis, a dairy cattle disease that costs the nation \$250 million yearly, will be tackled by top veterinary, farm, and dairy experts in a two-day symposium at the Edgewater Beach Hotel in Chicago Feb. 27-28.

The meeting, called the Mastitis Control Workshop, is sponsored by Jensen-Salsbery Laboratories, Inc., Kansas City. The company plans to introduce a new method to prevent and control the inflammation of cattle udders caused by the disease.

Between 200 and 300 persons are expected to attend the symposium, according to Dr. Vladimir Dvorkovitz, the company's vice president for production and research.

Women's Auxiliary News

The Midwinter meeting of the Women's Auxiliary to the California Veterinary Medical Association was held January 26th through 29th in Sacramento.

On Monday an Executive Board meeting was held with the president, Mrs. Charles Ozanian, presiding. Mrs. Russell Cope, our membership chairman reported 254 State members paid to January 4, and 356 National. Past due notices have been mailed to 322. This seems like a large number of unpaid dues, so if you owe any dues please send them to Mrs. Cope, 3419 Lowell Avenue, Richmond, Calif., as soon as possible.

Two changes were recommended in the by-laws. One on Article 2 Section 3 to read "Assist Veterinary students at the University of Calif. at Davis with loans and scholarships." The other, Article 4 Section 1, that the office of Secretary-Treasurer be divided into two offices instead of one. It was felt that the job was getting to be too large for one person, and it would be better to make it into two separate offices; thereby adding another member to the Executive Board.

Mrs. Louis F. Johnson reported that no new applications for loans had been made this year. There are still 3 loans out-standing, including the Stafford Memorial Fund, and payments are being made on these. She also told of the screening by her committee, of the senior students at Davis to find an outstanding student who would be eligible to receive our \$200 scholarship. We were presented 3 names, and given a detailed description of their qualifications. After a lot of deliberation, it was decided to award the scholarship to Mr. Robert Henry Smith. He is a married man with 3 children, and we hope that this amount will help him through the final stages of his education.

Tuesday, the Sacramento Valley Auxiliary, with Mrs. Robert Lewis and Mrs. W. E. Steinmetz as co-chairmen, arranged a lovely luncheon in the Sky Room of the New El Mirador Hotel. The view of the Capitol grounds seen from the vast expanse of windows, added to the beauty of the luncheon tables, which were decorated with camelias. The head table was especially pretty with a large arrangement of snapdragons, and each place was marked with a little angel placecard. Each member of the Executive Board was presented with a pink camellia corsage. Mrs. Luther Myers and Mrs. Eugene Storey were responsible for the decorations. Mrs. Charles Gunn and Mrs. Donald Martinelli had charge of the sale of tickets. It was very gratifying to see that 111 women turned out for the luncheon. Just a few years ago only a very small number of wives attended the Convention, and the growth in attendance is very encouraging. Mrs. M. W. Harry, President, and all of the Sacramento Valley members are to be complimented on

the fine job they are doing at the January meetings.

Mrs. Charles Ozanian conducted a short business meeting, and then asked Mrs. Donald Jasper of Davis to introduce Mr. Robert Henry Smith, who was then awarded the scholarship.

We were shocked and saddened to hear of the death of Mrs. Donald Barr of Fresno. She had not been well for some time, and passed away the day before the convention convened. We wish to extend sympathies to her family, and also to the family of Dr. J. F. Ast, who was hit by a car and killed.

It has been suggested that we start a scrapbook of the activities of the Auxiliary, and if anyone has any clippings that would be interesting to go into the scrapbook, please send them to me.

The President's dinner was held at the El Rancho on Tuesday night. It was decided that this time instead of a speaker, we would just have an evening of fun. The men spend several days listening to lectures, and in clinics or meetings, and it was thought that it would be better to have the dinner followed by entertainment. The program consisted of a musical trio who did pantomime impersonations of records. The rest of the evening was spent in dancing.

Our June convention will be in San Jose, and if the enthusiasm of the general chairman, Mrs. Wendell Johnson, is any indication of the kind of entertainment we will have, it should be very enjoyable. I will have definite news about the plans in the next newsletter.

Election of new officers is not too far away, and if you have any names to suggest for any of the State offices, please send them to anyone on the nominating committee. This will give us plenty of time to contact the person well ahead of the June convention. The nominating committee consists of:

Mrs. E. V. Bacon, 751 W. 111th St., Los Angeles, 44.

Mrs. Edward Braun, P. O. Box 21, Hanford.

Mrs. Wm. Steinmetz, 3520 Brockway Court, Sacramento, 18.

Mrs. E. H. Houchin, *Publicity Chairman*
232 Agnus Drive, Ventura, Calif.

* * *

The Women's Auxiliary to the Southern California Veterinary Medical Association is extremely proud of progress made this year. We began our reorganization early in the year with work on a new and comprehensive set of by-laws. These by-laws were accepted during the latter part of this year.

Our Silver Collar luncheon, a new type of venture for us, was held at Ciro's October 3rd. Purpose of the luncheon was to raise funds for guide dogs. We hoped to raise \$1,500, which is the cost of a guide dog, including the training period for the sightless person and his

OFFICERS AND MEETING DATES OF LOCAL ASSOCIATIONS

Note: Kindly notify our office of any changes or corrections.

Alameda-Contra Costa VMA

President, Leo Goldston.
Vice-President, George H. Muller.
Secretary, Tom Condon, 10 Ivy Drive, Orinda.
Treasurer, John Blackard.
Meetings, last Wednesday of month.

Bay Counties VMA

President, Richard J. Tompkins.
Vice-President, Maurice L. Boevers.
Secretary, Tom D. Harris, Jr., 2600 El Camino Real, San Mateo.
Treasurer, L. O. Johnson.
Executive Secretary, Herb Warren, 3004 16th St., San Francisco.
Meetings, second Tuesday of Feb., Apr., July, Sept. and Dec.

Central California VMA

President, Richard West.
Vice-President, J. A. Stanberry.
Secretary-Treasurer, Paul Chaffee, 2333 McKinley Ave., Fresno.
Meetings, fourth Tuesday of each month.

Humboldt County VMA

President, D. W. Butchart.
Vice-President, J. E. Lindenmayer.
Secretary-Treasurer, C. A. Lamb, 2525 J St., Eureka.
Meetings, January, May, September, December.

Kern County VMA

President, Addison L. Irwin.
Vice-President, Richard Stiern.
Secretary-Treasurer, Norman E. Cunningham, 2703 M St., Bakersfield.
Meetings, first Thursday of the month.

Mid-Coast VMA

President, Richard G. Ainley.
Vice-President, Russell R. Burton.
Secretary-Treasurer, W. H. Rockey, P. O. Box 121, San Luis Obispo.
Meetings, first Thursday of even months.

Monterey Bay Area VMA

President, L. J. Campbell.
Vice-President, J. Garibaldi.
Secretary-Treasurer, V. Todorovic, 47 Mann Ave., Watsonville.
Meetings, third Wednesday of the month.

North San Joaquin Valley VMA

President, Lyle A. Baker.
Vice-President, Robert F. Larson.
Secretary-Treasurer, Arthur J. Eisenhower, P. O. Box 747, Merced.
Meetings fourth Wednesday of the month.

room and board during six weeks spent at the school. The publicity was excellent and we felt very pleased, as our prime interest is in obtaining public relations for the veterinary profession as a whole. We hoped to raise \$1,500—we raised \$2,200. Thanks to the co-operation of the veterinarians, the affiliate members and the response of Auxiliary members. This project is being adopted as a yearly benefit. We have adopted the publicity name of "Ark Angels." Luncheon chairman, Bonnie McDole; 1957 president, Helen Vierheller.

During 1958 we plan to incorporate and to build membership.

Present roster of officers are: President, Bonnie McDole; First Vice-President, Elaine Putney; Second Vice-President, Charlotte Olson; Third Vice-President, Elizabeth Sattler; Correspondence Secretary, Virginia Macy; Recording Secretary, Pat Kimball; Treasurer, Fairy Ott; Program Chairman, Pat Taylor.

ELAINE L. PUTNEY, Publicity Chairman

Northern California Association of Veterinarians

President, J. O. Stiner.
Vice-President, R. N. Donnelly.
Secretary, Andrew Giamboni, P. O. Box 782, Red Bluff.
Meetings, second Tuesday of the month.

Orange Belt VMA

President, Chester A. Maeda.
Vice-President, Robert F. Lapham.
Secretary-Treasurer, Robert Y. Foos, P. O. Box 955, Victorville.
Meetings, second Monday of the month.

Orange County VMA

President, M. W. Loge.
Vice-President, Bart Baker.
Secretary-Treasurer, H. M. Stanton, 1192 Laguna Rd., Tustin.
Meetings, fourth Thursday of each month.

Peninsula VMA

President, Robert C. Lawson.
Secretary-Treasurer, R. M. Grandfield, 2600 El Camino Real, San Mateo.
Meetings, third Monday of the month.

Redwood Empire VMA

President, J. C. O'Brien.
Vice-President, M. H. Schaffer.
Secretary-Treasurer, Robert L. Chandler, P. O. Box 8, Ukiah.
Meetings, third Thursday of the month.

Sacramento Valley VMA

President, R. A. Mueller.
Vice-President, R. T. Hauge.
Secretary-Treasurer, R. C. Scott, P. O. Box 855, Woodland.
Meetings, second Wednesday of the month.

San Diego County VMA

President, H. R. Rossoll.
President-Elect, E. P. Bogart.
Secretary-Treasurer, Allan N. Davis, 903 N. Johnson, El Cajon.
Meetings, fourth Tuesday of the month.

San Fernando Valley VMA

President, Howard C. Taylor.
Vice-President, Robert A. Button.
Secretary-Treasurer, Ralph L. Reese, 23815 Ventura Blvd., Calabasas.
Meetings, second Friday of the month.

San Francisco Veterinarians

President, Roger Burr.
Vice-President, Edward Bland.
Secretary-Treasurer, William E. Mottram, 1001 Ocean Ave., San Francisco.
Meetings, every other month.

Santa Barbara-Ventura Counties VMA

President, G. S. Jackson.
Vice-President, F. W. Knoop.
Secretary-Treasurer, C. N. Harder, 5918 Los Angeles Ave., Santa Susana.
Meetings, every three months, no set date.

Santa Clara Valley VMA

President, Rex Taylor.
Secretary-Treasurer, Kay Bewley, 1410 N. 4th St., San Jose.
Meetings, last Tuesday of the month.

Southern California VMA

President, Willard D. Ommert.
President-elect, Howard C. Taylor.
First Vice-President, Burton Pike.
Second Vice-President, Robert J. Schroeder.
Treasurer, W. A. Young.
Secretary, Ralph C. Vierheller, 907 W. Philadelphia St., Whittier.
Executive Secretary, Don Mahan, 1919 Wilshire Blvd., Los Angeles 57.
Meetings, third Wednesday of the month.

Tulare County VMA

President, Charles Crane.
Vice-President, R. B. Barsaleau.
Secretary-Treasurer, Lionel H. Brazil, Rt. 4, Box 53, Tulare.
Meetings, second Thursday of the month.

LOCAL ASSOCIATION NEWS



Woman Exhibitor, Dr. Don Britten, Dr. Ron Humason, Woman Exhibitor, and Dr. Lionel Brazil at Show.

Tulare County VMA Assists at Dog Show

Doctors Don Britten of Visalia, Ron Humason of Dinuba and Lionel Brazil of Tulare are shown as they performed health examinations at the recently held Sequoia Kennel Club Dog Show. The unbenched show was held at the Tulare County Fairgrounds on November 24, 1957, and included obedience classes as well as regular breed judging classes.

There were 532 dogs entered in this well-presented show. The members of the Tulare County VMA, serving with Dr. C. T. Lambert of Visalia, who was show veterinarian-in-charge, were kept busy as the numerous dogs were presented at the stainless steel tables for physical examination. All veterinarians who served throughout the day were uniformly dressed in clean, white hospital coats. The dogs were not handled excessively by the examiners and a standard examining procedure was established and followed during the show.

The efficient and professional activity of the show veterinarians earned the praise and commendation of show officials and exhibitors alike. Captain Berry of the American Kennel Club and Jack Bradshaw, show superintendent, were especially complimentary of the veterinary service. This service, which was voluntarily extended through cooperative effort of the Tulare County VMA members,

demonstrates the true working public relations activity of this local association in the San Joaquin Valley.

* * *

The monthly dinner meeting of the Tulare County VMA was recently held at the Tagus Ranch. Robert Miller, Farm Advisor from the University of California Extension Service, was guest speaker. Dr. R. B. Barsaleau of Visalia introduced Mr. Miller who elaborated on the proposed bull fertility testing program which many county livestock owners appear to want. Closer liaison, between the practicing veterinarians and members of the Extension Service, is most desirable for mutual service to county livestock owners. This theme was commented upon by attending veterinarians and future plans include better information exchange between the veterinarians and Extension Service.

A discussion of the recently-held bull fertility testing demonstration revealed that ranchers in attendance at the demonstration represented over 7,500 head of breeding cows. Equipment necessary for a bull fertility testing program is being investigated by the Tulare County VMA and future purchase of such equipment is assured. Since the current methods of evaluating a bull's fertility are slow and frequently unfeasible, the newer technique will greatly facilitate testing of large numbers of purebred bulls in a shorter time.

Alameda-Contra Costa VMA

Installation of new officers of the Alameda-Contra Costa VMA took place November 27. They are (see photo) Dr. Leo S. Goldston, President (seated). Standing from left to right, Dr. John Blackard, Treasurer; Dr. George Muller, Vice-President, and Dr. Tom Condon, Secretary. Meetings of the Association during 1958 will be held on the last Wednesday of January, March, May, June, August, October and November.



* * *

Southern California VMA

Installation of officers was held at the Beverly Hilton Hotel, January 11. Dr. Fred Walker Jr. was installation officer. Decorations at the formal dinner-and-dance party were under the guidance of Mrs. Pat Taylor and Mrs. Bonnie McDole.

Installed as president was Dr. Willard D. Ommert, large animal practitioner from Hollydale.

Dr. Charles Ozanian presided at a large animal meeting recently. Interesting case histories and questions made the gathering a huge success.



DR. WILLARD D. OMMERT

JANUARY-FEBRUARY, 1958

Bay Counties VMA

At the December 10, 1957, annual meeting of the Bay Counties VMA, held in San Francisco, the following officers were elected: President, Dr. R. J. Tompkins; Vice-President, Dr. M. L. Boevers; Secretary, Dr. Tom D. Harris Jr., and Treasurer, Dr. L. O. Johnson.

Dr. Russell P. Cope officiated at installation ceremonies, after having presented Dr. Irving M. Roberts, retiring president, with a handsome pen-set, suitably engraved from the Association.

Several proposals to amend the By-Laws were presented and passed.

The Association endorsed the following candidates for officers of the State Association: President, Dr. Richard L. Stowe; President-Elect, Dr. Charles H. Ozanian; First Vice-President, Dr. E. R. Braun; 2nd Vice-President, Dr. Ernest H. Houchin; 3rd Vice-President, Dr. Ralph L. Collinson; Treasurer, Dr. Russell P. Cope.

Dr. Richard L. Stowe discussed State Association affair. Officers of the Santa Clara Valley, San Francisco, Peninsula, Marin County and Alameda-Contra Costa locals were introduced.

* * *

Santa Barbara-Ventura County VMA

The December dinner meeting of the Santa Barbara-Ventura County VMA was held in Ventura, December 11, 1957.

Guests were Dr. P. C. Enge of the Extension Service and Mr. E. L. Bramhall, who is the Ventura County Livestock Farm Advisor. Dr. Enge spoke to the group on "Correlating the Activities of the Extension Service with those of the Large Animal Practitioner."

Following the program there was a short discussion concerning local problems.

The January dinner meeting was held at the Palms Restaurant, Carpinteria, January 15. Dr. Robert Stansbury, Pasadena, spoke about "Cats and Conditions Peculiar to the Species." Another guest present was Dr. Rodney Burroughs, base veterinarian, Oxnard Air Force Base.

* * *

Redwood Empire VMA

Dr. Richard L. Stowe and Dr. Russell P. Cope addressed the Redwood Empire VMA January 16th at their meeting held in Cotati. Drs. Stowe and Cope discussed State Association affairs.

Dr. McCapes Grandfather Again

Mr. and Mrs. Richard McCapes became the proud parents of a second child, a boy, on January 5th. Richard is the son of Dr. A. M. McCapes, and is attending the School of Veterinary Medicine, Davis.

OUT-OF-STATE NEWS

The Nevada State Veterinary Association will hold its annual meeting at the Holiday Hotel in Reno on February 28-March 1, 1958. California veterinarians and their wives are invited to attend this meeting and to enjoy the weekend in Reno.

All of the seventeen counties in Nevada are now participating in the brucellosis eradication campaign. Seven of these counties have been declared Modified Certified areas; five more of the counties are nearing their goal of becoming Modified Certified counties.

The Nevada State Department of Agriculture has established a branch laboratory in Elko. This laboratory is under the supervision of Dr. R. A. Bennett, Jr., and is responsible for the brucellosis testing in northeastern Nevada.

* * *

The annual winter meeting of the Montana VMA was held in Bozeman, December 14-15.

* * *

Dr. R. V. Jessup, Glendale, was one of the speakers at the Arizona VMA meeting held in Phoenix, December 1-3.

American Board of Veterinary Toxicologists

The American Board of Veterinary Toxicologists has been formed with the following officers: President, Dr. H. E. Furgeson, Anaconda, Montana; Vice-President, Dr. G. R. Spencer, Pullman, Washington, and Secretary, Dr. William F. Harris, Puyallup, Washington.

A meeting was held in Salt Lake City on January 15, at which time a constitution, by-laws and a strict set of membership requirements were adopted.

Veterinarians who are deeply interested in veterinary toxicology are invited to become members.

AVMA Humane Act Awards

The American Veterinary Medical Association announces another of its Humane Act Awards in which for the many past years there has been a growing interest.

The award will be granted to some boy or girl not more than 18 years of age, who performs some act or acts which can be interpreted as kindness to animals. It might be a rescue or some project or activity worthy of such consideration. Anyone can make a nomination.

Nominations and pertinent facts should be sent to the Humane Act Award Committee, AVMA, 600 So. Michigan Ave., Chicago 5, Ill., not later than April 1, 1958.

In Memoriam

DR. JACOB FREDERICK AST

Dr. J. F. Ast, 79-year-old retired San Mateo County veterinarian, was killed the night of January 28 in front of the Hotel El Rancho, headquarters for the Midwinter Conference. Dr. Ast had attended the President's Banquet in the hotel and was crossing the street to reach his hotel when he was struck by a car.

A graduate of San Francisco Veterinary College, class of 1907, Dr. Ast was a long-time member of the State Association. He was made a Life Member of the CVMA in June, 1957.

He is survived by his wife, Josephine, of San Mateo, and the following children: Mrs. Rita Ast Thomen of Belmont, Joseph F. Ast of San Lorenzo and Frederick W. Ast of Kelseyville. He was a brother of William Ast of Williams, Mrs. Emily Williams of Concord; Herman P. Ast of Mt. View, and Miss Bertha Ast of San Francisco. Four grandchildren also survive.

* * *

DR. PRICE R. EDWARDS

Dr. Price R. Edwards, retired, passed away in Visalia February 10th, following a year's illness. He was a Life Member of the CVMA and had been a dairy and livestock inspector in Kern County for 37 years.

McAdams Agency Announces New Farm, Veterinary Section

William Douglas McAdams Inc., the world's largest pharmaceutical advertising agency, has announced plans to provide clients with the first integrated service in two closely related fields, veterinary medicine and the agricultural sciences.

Dr. DeForest Ely, president of the agency, said an all-inclusive "package" would be offered, to include: market research, merchandising, product development and public relations.

Life Member Leo Henrich Ill

Dr. Leo O. Henrich, Life Member of the CVMA and the AVMA, has been ill for several months, we have learned. It would be nice if some of his old friends would drop him a note. He would appreciate hearing from them while convalescing. His address: P. O. Box 22, Tulare.

THE CALIFORNIA VETERINARIAN

OPPORTUNITIES

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Veterinarian with at least one year's practice experience, primarily for Small Animal practice but to occasionally assist with Large Animal practice. Excellent opportunity for advancement. R. E. Hoadley, DVM, Box 246, Indio, California.

* * *

Veterinary Positions

Excellent opportunities in California State Government for graduate veterinarians with or without experience in practice. Salary range \$530-\$644. Senior veterinary students eligible to apply before graduation. Write at once for further information to California State Personnel Board, 801 Capitol Ave., Sacramento 14.

* * *

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Modern small animal hospital on Rosemead Blvd., Temple City, "M" Zone, 50' x 150', modern architecture. Forced air heating, air

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* * *

Dog and Cat Hospital in Oakland, established over 30 years. Doctor deceased; fully equipped; good living quarters. Write Mrs. L. D. Prosser, 512 E. 12th St., Oakland, or phone TE 4-9031.

* * *

For sale: Small animal hospital and living quarters in Los Angeles suburb. Established 17 years. No real estate. Very reasonable rent. Good lease. Box A-55, THE CALIFORNIA VETERINARIAN.

Dr. Schroeder to Public Health Committee

Dr. Robert J. Schroeder, L. A. County Livestock Inspector, has been appointed chairman of the Public Health Committee of the U. S. Livestock Sanitary Association. The association is concerned with the study of livestock and poultry sanitary science, milk and meat hygiene. It also serves as a center for information relating to all phases of the livestock industry.

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Col. McNellis Assistant Chief, Veterinary Division



COL. RUSSELL MCNELLIS

Colonel Russell McNellis, V.C., U. S. Army, formerly stationed at San Francisco, has assumed new duties as assistant chief of the veterinary division. A well-known writer on veterinary medicine, Col. McNellis succeeds Col. Ralph W. Mohri, V.C., who has been assigned to headquarters, Second U. S. Army, Fort George G. Meade, as chief, veterinary division, medical section.

Livestock Medications

(Continued from page 17)

nearly recognize the public convenience and necessity, without ignoring the questions of health and safety, than any law which has yet controlled livestock remedies. Certainly, it is now possible for you to legally engage in the business of providing drugs, which was not possible before. In many cases the principal supply of drugs is through the veterinarian and often in conjunction with the services which he customarily renders.

I should like any of you who are concerned about the effects of this law upon your professional practices and the things which you may now be doing in this field, to consult with us. We are interested in your problems, and we feel certain that we can work with you toward a satisfactory solution of them. We believe that there will come to your profession, and to others who are supplying drugs, some benefits from this law. We want, as a part of our newly assigned duty, to work very earnestly for those benefits. One of our aims will be to provide assurance that the drugs sold to you and to the public generally are properly labeled and with guarantees which have meaning. Our first efforts in this direction are to employ two additional chemists; who will analyze official samples.

If you have questions about the products sold to you, or to your clients, we expect to be in a position to provide or develop factual information about them.

It will take us some time to get into full operation; it involves many changes for many people. We hope to be reasonable, and want to work with you, with manufacturers, guarantors, and solve problems under the law in a way that is satisfactory to all. Please do not hesitate to come to us, if at any time we can be of service.

Upjohn's Oral Antibiotic Combination for Small Animals

A new oral antibiotic combination, the first of its type specifically "tailored" for cats and dogs, has been developed by The Upjohn Company, according to Dr. J. L. Davidson, head of their Veterinary Medical Department. Known as Albaplex, the compound combines the broad-spectrum antibacterial activity of tetracycline and the highly potent and fast-acting effect of novobiocin.

The new antibiotic compound is effective against a wide range of organisms in the treatment of respiratory, urinary, gastrointestinal and dermatological infections. Albaplex is also indicated in canine coccidiosis and leptospirosis, bacterial complications of viral diseases, and in pre- and post-operative prophylaxis.

Extensive clinical studies have shown that Albaplex is well tolerated by both cats and dogs. There is no evidence of renal or hepatic damage, urticaria or maculopapular dermatitis following administration of the new compound.

Each Albaplex capsule contains tetracycline phosphate complex equivalent to 60 mg. of tetracycline hydrochloride and 60 mg. of novobiocin sodium. Recommended daily doses for dogs range from 1 or 2 capsules for small dogs, to 6 or 8 capsules for extremely large dogs. One capsule every twelve hours is the recommended dosage for mature cats.

Pitman-Moore Appointments

Four new vice-presidents, a treasurer, associate director of the firm's biological laboratories, and assistant secretary have been named by Kenneth F. Valentine, president of Pitman-Moore Company.

The new vice-presidents include Stewart E. Ruch, director of sales; Dr. S. R. Bozeman, director of the company's biological laboratories; Dr. C. A. Bunde, director of research; and Harry Sefton, director of personnel.

Allen B. Faux is the new treasurer. E. F. Andrews was named associate director of the biological laboratories and John R. Jewett assistant secretary.

Schering Pamphlet Salutes Veterinarians

A pamphlet entitled "Salute to the Veterinary Medical Profession of America" has been produced by Schering Corporation for use in veterinarian's office waiting rooms and at veterinary exhibits at state fairs.

Roy Conner, veterinary marketing manager for Schering, said "This pamphlet is part of Schering's continuing program to promote the importance of the veterinarian and veterinary research to our national health and well being."

Dr. Reginald A. Stocking was one of the speakers at the Intermountain VMA annual convention in Salt Lake City, January 16-18.

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A. Professional services rendered, mistake, error, etc.

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5. Contracted Liability.

A. Lease agreement, etc.

B. Loss to dog by fire, maximum \$1,000 per dog, \$25,000 aggregate.*

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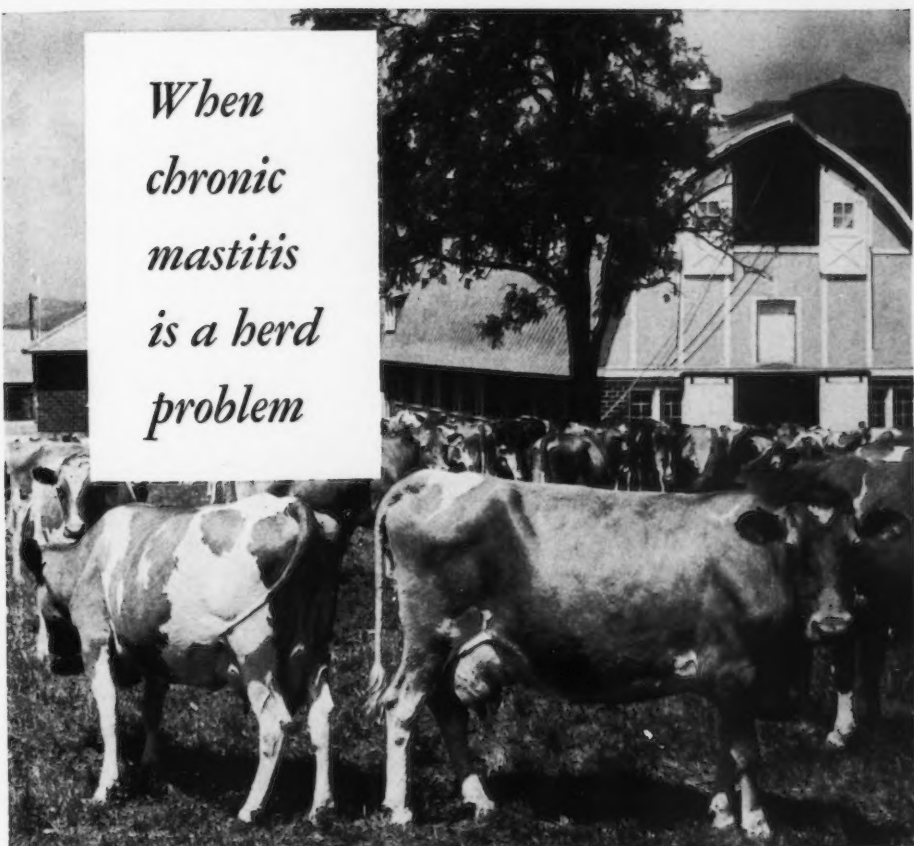
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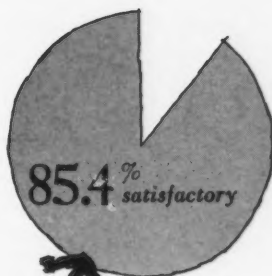


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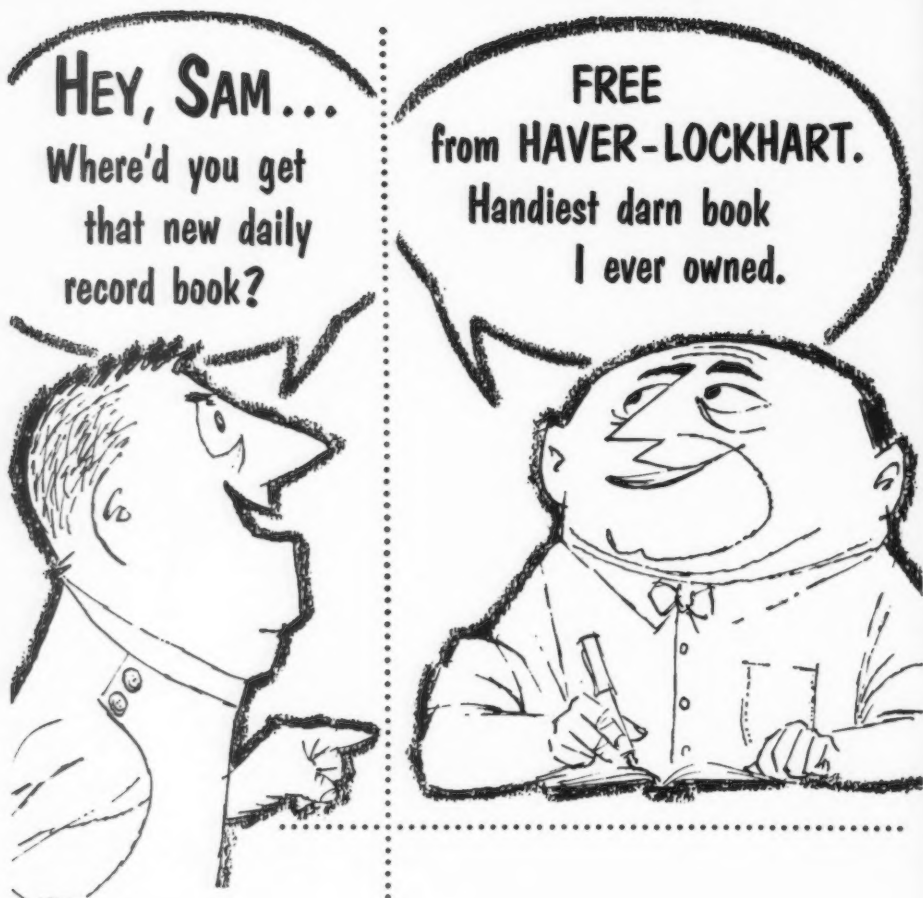
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